Spreading My Wings:

How Can I Improve My Practice And Contribute To The Professional Knowledge Base Through Narrative-autobiographical Self-study?

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Abstract

"How can I improve my practice and contribute to the professional knowledge base through narrative-autobiographical self-study?"

Through the use of Whitehead's (1989) living educational theory and examination of my stories, I identify the values and critical events that have helped me come to know my own learning and shape my professional self. Building on the premise that educational knowledge/theory is created, recreated, and lived through educational inquiry; I strive to make meaning of this data archive, collected over 7 years of teaching. I chart my journey to reexamine my beliefs and practices, to find a balance between traditional and progressive practices and to align my theory and practice. I retell, and, thus, in some way relive, my own "living contradictions." A reconceptualization of the KNOW, DO, BE model (Drake & Burns, 2004) is used to develop strategies to align my practice, including a six-step model of curriculum design that combines the backwards design process of Wiggins and McTighe (1998), the KNOW, DO, BE model (Drake & Burns) and Curry and Samara's (1995) differentiation planner.

Acknowledgements

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Table of Contents

List of Figures

"A man who understands the World is learned;

a man who understands the Self is enlightened."

-Lao Tzu, The Book of Tao

"Self-knowledge is best learned, not by contemplation but by action.

Strive to do your duty and you will soon discover of what stuff you are made."

-Johann Goethe

CHAPTER ONE: MY STORY

This is a self-study of my educational journey and my quest to define myself professionally and personally as an educator in a K-8 elementary school in a school board in southern Ontario from 1999 to 2007. With a focus on the development of my educational values and educational knowledge in my professional practice, I intend this thesis to chronicle the integration of the educational processes of transforming myself and my educational knowledge through reflection. I seek to document my experiences during the early years of my career and to examine how these experiences led me to a crossroads in my career that forced me to examine my practice and eventually to better align my practice with my own values and philosophy. Through the processes of exploration, discovery, recovery, and reconstruction, I hope to improve and examine my practice, document my journey, and show how knowledge can assume a living form because it is always being reformulated and reworked.

I began by asking the question: How can I improve my practice and contribute to the professional knowledge base through seeking to balance traditional and progressive views of curricula and assessment in a climate of accountability? Although this question remains at the heart of my work, the reader will see how I travelled many paths before coming to understand that my educational knowledge was a living education theory whose validity could be judged by living standards of judgement. According to Whitehead (2006) "standards of judgment are what we use to evaluate the quality/validity of our claims to know what we are doing in our professional practices" (Legitimating the embodied knowledge of professional educators in the Academy, para. 1). Advising the researcher undertaking such a self-study, Cole and Knowles (1995) wrote:

> ... we believe that becoming a teacher or teacher educator is a life-long process of continuing growth rooted in the personal. Who we are and come to be as teachers and teacher educators is a reflection of the complex, ongoing process of interaction and interpretation of factors, conditions, opportunities, relationships, and events that take place throughout our lives in all realms of our existence - intellectual, physical, psychological, spiritual, political and social. Making sense of prior and current life experiences in the context of the personal as it influences the professional, is in our view, the essence of facilitating professional development. Thus we situate professional inquiry in the context of life or personal histories (p. 147).

In keeping with this advice, this chapter introduces the beginnings of my personal story and provides the reader with insight into who I am and why I undertook this project. I hope that this chapter will set the stage for the unfolding journey

In the Beginning

"In the light of the moon a little egg lay on a leaf."

~Eric Carle's Very Hungry Caterpillar

"Even a thought, even a possibility can shatter us and transform us."

~Friedrich Wilhelm Nietzche

The initial title of this thesis was "A Beginning Teacher in a Climate of Accountability." A meeting with my thesis advisors forced me to revaluate. Susan and Adele, two women whom I have worked with on previous projects, insisted that I did not typify a beginning teacher. I recognized that they were right—I had never really identified with many of the concerns of beginning teachers. Perhaps this was because my journey in education started

long before I began teaching. In fact, education was a large part of my life even before I entered the school system as a student. My mother was a dedicated elementary school teacher who would bring me to school on her many holidays and summer days to help in the classroom. At home, I helped mark papers, had an extensive, constantly changing library made up of children's stories, and made crafts and art projects that would be used as samples in her classroom. As a result, teaching came rather naturally to me as a career choice. I am told that even in kindergarten when I was asked what I wanted to be when I "grew up" I answered that I wanted to be a teacher and, when I began writing this, I had never questioned that choice, although I had often questioned my identity and my practices as a teacher.

And So It Begins…

"He started to look for some food."

~Eric Carle's Very Hungry Caterpillar

"To teach is to learn twice"

~Joseph Joubert

In 1995 I began an undergraduate degree in Child Studies at Brock University. The Child Studies program was touted as an interdisciplinary program that examined child development from a variety of sociological, psychological, anthropological, and historical perspectives. The program appealed to me as it would help further my understanding of the children I hoped to teach and because I had no great love of any particular subject and could not imagine majoring in one of the traditional subjects offered. I believe that this choice helped shape my views as an educator. As I entered teacher's college in 1998, I did so with a holistic, constructivist, integrated approach to

learning that valued and sought to understand and develop knowledge that is both deductive and inductive, qualitative and quantitative, and, occasionally, intuitive (Walker & Soltis, 1992). My year at teacher's college did little to change my philosophy. In 1999, the year I graduated, I wrote:

> *The factual knowledge of each generation becomes obsolete at an ever increasing rate. Almost daily, new findings in the realms of science and technology disprove established theories. To prepare students to cope with this, I want to help my students learn how to think, not just learn facts. I feel the goal of education should not be the accumulation of unusable and disjointed facts but the thinking skills and strategies required to solve problems. I believe thinking skills can, and should be integrated and taught across all disciplines and grade levels. (Paper, 1999)*

This constructivist view was greatly influenced by the work of John Dewey (1959), which I studied as part of a curriculum course:

> *His analogy of the explorer with a map has influenced me greatly. He suggested that children are like explorers who discover unknown territory and then produce a rich map that will guide them. He wondered if by giving children maps, without giving them the experience of mapmaking, we are robbing them of meaning. I think learners should be helped to create their own knowledge and should be told regularly that if it does not make sense to them, it may not make sense because absolute truths are VERY rare. I want kids to realize that things are often more complex than they appear and that the so-called experts are all really making their best guesses. (Paper, 2001)*

I was also greatly influenced by Howard Gardner's (1983) multiple intelligences and Bloom's (1956) taxonomy, work that has been combined and described as differentiated instruction. Differentiated instruction "focuses on meaningful learning or powerful ideas for all students" (Tomlinson, 2001, p. 2).

> In a differentiated classroom, the teacher proactively plans and carries out varied approaches to content, process, and product in anticipation of and response to student differences in readiness, interest, and learning needs. (Tomlinson, 2001, p. 7).

Teachers plan to address learners' different needs, rather than planning one lesson for everyone and adjusting it when it does not work for some students (Mitchell & Hobson, 2005). As I have never had a homogeneous group of students (and, in fact, do not believe that such a group exists) this has had tremendous implications for my teaching practice.

In September of 1999 I began teaching in a grade 2-3 split class. Due to my own inexperience and the nature of the circumstance, it was one of the greatest challenges I have faced. I was hired 2 weeks into the school year. The school had an unforeseen increase in students and was forced to reorganize their classes. I arrived at the school to be informed that I had 2 days to dismantle the school's computer lab and create a classroom. Standing in the room I remember feeling incredibly overwhelmed—especially as men began arriving from the school board asking me what colour of chalkboards I wanted, how many bulletin boards I needed, and where to put them all. We did not have enough textbooks for the first few months and no shelves to put them on until after the Christmas break. With the clock ticking, long-range planning was the furthest thing from my mind.

I did recognize a need to develop good communication with parents as soon as possible as students would be pulled from straight grade 2 and 3 classes and placed in my room. I anticipated, correctly, that many parents would have reservations about disrupting their child to place him/her in a split class with a new teacher. I left the school that night and began calling parents to introduce myself. Many of the phone calls were reminiscent of the interview I had gone through to get the job. Parents wanted to know everything from how I would ensure that curriculum expectations for both grades were met to how I would deal with discipline issues. Thankful that my counsellors had required me to consider my philosophy ahead of time, I spouted words from the philosophy I had written during my year at the Faculty of Education. The sad fact was, however, that I struggled to act on my own beliefs that year. Jack Whitehead (2000) would suggest that this is a living contradiction typical of educators who often hold values that are denied in practice.

I tried to stay true to my principles. I attempted to find ways to recognize every child for his/her achievements, despite the fact that academic achievements were valued more than others by the school system. I attended many sports games and music recitals outside of school so that students would know that I placed value on these abilities or "intelligences." I dived head first into the Four Block literacy program because, aside from the integration of the language arts within each "block" (reading, writing, working with words, and self-selected reading) that is inherent in the framework, there are also many ways to make connections from one block to another. The authors of the Four Blocks framework advocate integration and maintain, "to be successful in teaching ***all*** children to read and write, we have to do it ***all***!" (Cunningham, Hall & Sigmon, 1999, p. 3). I was thrilled to discover that this philosophy mirrored my own and that integration of

the language arts, indeed all learning, was really at the heart of the Four Blocks. Although I was excited about this program and felt that it fit well with my own beliefs, I was still experiencing tension as I felt that I had to defend myself in the larger community, despite the fact that the program was part of a school board initiative and was based on a great deal of research.

I recalled this experience in a paper entitled "An Unpopular Philosophy in a Climate of Accountability: An Observational Study In Defence of My Own Practice and The Four Blocks Literacy Model" that I wrote for a literacy course I took in 2002:

> *During my first year of teaching I had a split grade and parents were extremely concerned over how I would "cover" the many expectations in the Ontario curriculum. I sent home a weekly newsletter outlining the kinds of things we were doing in class. I had one mother approach me at first term saying that she couldn't see how I would finish all of the expectations at the end—she had actually been checking them off on her copy of the curriculum! This climate of accountability makes it very difficult to stray from teaching sub-skills and expectations that can be checked off the list. It awards little respect for more complex learning that draws upon children's experiences and knowledge from many sources to create their own unique understanding. Because I believe that learning is complex and holistic, I wanted to be teaching in a more integrated way but found that my administration and the students' parents were much more comfortable with me using the basal readers and textbooks...My colleagues also remained sceptical. They continued to insist that language learning must be taught as distinct sub-skills, in part, because this was how they had experienced language learning. I disagreed, but as this was a*

typical approach to teaching literacy in many schools I felt that I had little to justify my stance. (Paper, 2002)

I felt a lot of pressure to be "accountable" that year. This is not particularly surprising as I entered teaching at a time when accountability was the common buzzword. For example, the word "accountability" produces 10, 661 ERIC database records within the last 20 years, over one-third of which were written in the last 5 years. Accountability is primarily defined in Ontario by the Education Quality and Accountability Office, an arm's length agency of the provincial government established in 1996. Accountability, by their definition, has become almost synonymous with standardization:

- Increase, through a base of clear and reliable information, public ability to make judgments about the quality of education available ***across Ontario***
- Report on the success of our students measured against ***accepted, understandable standards*** in order to evaluate and improve learning
- Ability to analyze student achievement in Ontario ***in relation to national and international standards***
- Provide students with clear and timely information on their progress
- Reinforce student successes and identify areas where attention is needed
- Provide information and direction which give students insight to plan for their future
- Demonstrate to students that the knowledge and skills required of them are ***consistent across the province***

(Available at http://www.eqao.com/AboutEQAO/04about.aspx?Lang=E. Emphasis added)

Ontario's reform efforts included centralization of curriculum and assessment and an introduction of standards for school learning. These were similar to other nations such as Australia, New Zealand, Sweden, and the United States (Whitty, Power, & Halpin, 1998). In the United States, accountability has been defined by the No Child Left Behind legislation, the single largest nationalization of education policy in the history of the United States (Elmore, 2003). In November of 2003, Educational Leadership dedicated an entire issue to the No Child Left Behind act of 2001 and the subject of accountability. While the authors who contributed found themselves on both sides of the fence, the bulk of them claimed that, despite the best intentions, accountability initiatives had failed to produce the desired results. Anne Wheelock (2003) shared data based on the implementation of a standardized test in Massachusetts that showed increasing rates of grade failure, declining graduation rates, miscalculated pass rates, and success or failure largely determined by luck rather than school quality. A similar issue was published again in November of 2005. The authors included in this issue presented formative assessment as a much needed reform. It seemed that despite the proliferation of standardized tests used to ensure no child was left behind, many children were. This was not unlike the situation in Ontario:

> Last week in Ontario brought leaked news reports that 29 percent of the province's Grade 10 students could not pass a literacy test... Yet again these students are serving as the guinea pig cohort for the government's mismanaged implementation of secondary reform....the government of California proposed delaying its high school graduation test for a year (reading, writing and math taken in senior year) due to concern about legal challenges. The lack of

> mechanism to determine a passing score and court rulings in other states saying students cannot be tested on things they have not actually been taught forced its postponement…the New York State drop-out rate will skyrocket now that students have to pass Regents examinations in order to graduate. So far the rate has gone from 15.6% in 1998 to 19.5% in 2000. Their recent report states: "Whenever standards are raised without the necessary academic and social supports, graduation rates tend to decline and drop out rates increase." (Adamson, 2001, p. 1)

Despite my own desire to be 'accountable', something which seemed almost synonymous with competency in the prevailing climate of accountability, I struggled with planning and assessment all year long, in part because it seemed that to be accountable one must "standardize" instruction and assessment and this seemed to be in direct odds with my own beliefs. I have a strong dislike of standardization and testing from childhood:

> *I recall that we wrote the CCAT test in school in grade 4 and that I wrote another assessment in grade 5. At the time I didn't know why but I resented being taken from class with a few other students and asked to write the test at a desk set up in the hall. Although I later learned that I had gained acceptance to the gifted program, my mother never spoke of it at the time and chose to keep me enrolled at my home school. In grade 7 we wrote a test again. I was not feeling well at the time and had difficulty focusing on the test. I scored very poorly on the quantitative section of the test. So poorly, in fact, that I was grouped with other "struggling" students and removed from the class during math time for extra remediation. I was*

horribly embarrassed and began to avoid school. My mother finally spoke to my teacher and shared her concerns about the reliability of test results that had changed so much in 3 years. I was retested and my test scores were significantly higher. The lesson for me was that there were simply too many variables that could influence testing for it to be a true picture of one's capabilities. (Journal, 2001)

A greater reason for my struggle with planning and assessment was a lack of time. Time is, in fact, perhaps the greatest obstacle to educational change (Black, 2003; Bruno, 1997; Fullan & Miles, 1992). Good instruction and assessment takes time and time is at a premium for a beginning elementary educator challenged with planning, delivering, and marking up to eight lessons per day. In my first year of teaching, I was deluged and found myself arriving at school at 7:30 A.M. and not returning home until 8:00 or 9:00 P.M. I survived day by day and often used the texts I did have available to me to assign "busy work" to find some quiet time to plan for the next day. I felt that lessons were disjointed and all too often I would collect a pile of notebooks only to stare at them with nervous trepidation because I had no plan for how I would assess the work I had assigned. This frightened me considerably because my grade 3 students would be writing the EQAO test at the end of the school year. As the year wore on I began to "teach to the test." I had the students complete questions from previous years' tests, began to incorporate the icons from the test in my everyday teaching and assigned similar math problems as weekly homework. I allowed the test to take over my classroom because I felt that I had little time to plan effective, interesting lessons that would prepare my students for the test.

Richard Elmore (2003) comments that accountability initiatives have tended to over invest in testing, taking money away from the educational system that could be used to improve it. I wholeheartedly agree with this statement. In 2000, after I administered the grade 3 standardized test I wrote:

> *The cost to test all grade 3 and grade 6 students in 1999 was estimated at $12 million. The loss of this money to the system as our class sizes increase is disgusting. I have two students with cerebral palsy in my class who are, of course, exempted from the test but I suspect that some of the funding dollars we are losing for these students are going to pay for the very same test! (Paper, 2000)*

In the summer of 2001 I was asked to write my epistemology for a course I was taking on assessment. I think my statement at the time illustrates the frustratión and sense of failure I felt at the time:

> *I reviewed my philosophy of education before sitting down to write this paper. As I read, I found that I still felt strongly about the ideas I expressed 2 years ago but I also became aware of how often I have strayed from these ideas because I have been in "survival mode". It was a rather disenchanting experience. (Paper, 2001)*

Ironically, this comment was made after a very successful year of teaching. My evaluations were excellent; parents were incredibly supportive and appreciative; my students had done very well; and, although I was unaware of it at the time, my students and I had effectively negotiated how to tackle the curriculum and had arrived at shared objectives through class meetings (Drake & Burns, 2004). In the same paper I shared the story:

This past year with my grade 2 students I had planned to have students do a project on animals. I had a simple worksheet that would take them through the research process and then they would take the information on the worksheet and write it in sentences as a written report. My students decided to do their research in pairs. When I asked why, they told me that it was helpful to have a partner in case there were words they couldn't read. They didn't like the worksheet because they said it didn't talk about all the 'cool' stuff like on T.V. We eventually settled upon them writing five of their own questions and then writing jot notes under each question. They took these jot notes and created a written report. Interestingly, although I had not asked that they write the report in paragraphs, this was something we were covering in our Guided Writing Block and many students asked if they could write in paragraphs. Due to the question and jot note format we had created, this was quite easy for them as they could take the question they asked and rewrite it as a topic sentence, then use the jot notes as details. However, they did not want to leave the project there. We had been to the science fair at our school recently and they decided that they wanted to type up their reports and put them on bristol board along with pictures, create a diorama of the animals' habitat (something they had seen at the fair), and have their own animal fair, inviting other classes in the school. As the project was now so far away from what I had envisioned, I asked them how I should mark it. As a class we reviewed the rubric I had planned to use and made changes. When I asked them to self-evaluate using the rubric it was obvious that they were extremely proud of what they had achieved. This project was certainly one of the most positive I have experienced. (Paper, 2001)

I had even been asked to facilitate workshops on assessment for other teachers in my region. At the planning sessions I discovered that the curriculum consultants valued and encouraged the type of planning and assessment I was attempting. They advocated using rubrics, recording grades by achievement of the standards rather than as a mark on a worksheet and reporting the mode, or most consistent mark, as opposed to a calculated average. However, when it came down to meeting with teachers, I found few open to change and many who still spoke of assessment as columns of marks in a grade book—anything else, it was suggested, was hardly valid assessment.

I realize now that my sense of frustration, failure, and insecurity, particularly regarding assessment, came from trying to stay true to my philosophy while surrounded by fellow teachers with drastically different, more traditional views. I believe that validation from others was particularly important to me in this area of my practice because I had never felt confident in my assessment practices. While writing this paper, I reflected on what might have caused this insecurity. I think it is very telling that the text book used in my Educational Psychology class, the class supposedly designed to provide me with the theory to guide my practice, had only two chapters out of 15 on assessment and both fell at the end of the book. My subject specific courses were mostly formatted as lessons that preservice students participated in and learned from at the same time. Assessment was rarely discussed. My degree in Child Studies had included classes dealing with child development and cognitive psychology, focused on ensuring that learning activities were appropriate and well-planned. I registered for an optional course on assessment only to find that the course was cancelled due to low enrollment. This

seems to indicate that assessment was not valued at the time, despite the accountability initiatives in place.

A Thirst for Knowledge

"On Monday he ate through one apple, but he was still hungry."

~Eric Carle's Very Hungry Caterpillar

"I am convinced that it is of primordial importance to learn more every year than the year before. After all, what is education but a process by which a person begins to learn how to learn?"

~Peter Ustinov

In 2001, I transferred to a different school and different grade. I selected the school because it had a reputation for being a progressive school with a young staff. I hoped to find others with similar philosophies that I could learn from and, therefore, feel more confident in my practices. One teacher, in particular, has proven to be a kindred spirit. Yet, over the years we have had many conversations regarding assessment and how inadequate we feel at report card writing time when most teachers are discussing how they "calculate" their marks and showing off the impressive columns of numbers recorded on their computer spreadsheets, while we stare at the seemingly limited data we have. We reassure each other that the rubrics, checklists, peer assessments, and observations we record are more meaningful and that many assignments are given as practice and should, therefore, not be assessed. As a result, I have greater confidence in my assessment practices although, at the time, the more experienced teachers who continued to stress that accountability is synonymous with intensive grades based record keeping frequently intimidated me and led to further insecurities.

During my first year at this school I sought not only to find kindred spirits at the school but also through my courses at Brock. That summer, I met Susan Drake who advocated being a "change agent." She was a staunch defender of integrated curriculum and had devised a model she called KNOW, DO, BE to represent the key elements of integrated planning as she saw them (Drake, 2001). She was seeking to apply this model and to explore issues of assessment in an integrated curriculum. Hoping to find ways to improve and defend my practice, I initiated a curriculum project, calling upon two other teachers who were fellow students with similar experiences and views. We all felt pressured to be accountable but believed that students learned best when the curriculum was relevant. We met on Saturdays for a period of 5 months. Our goal was to explore integrated curriculum as a possible bridge between accountability and relevancy. Vars (2000) had completed research that suggested that students in interdisciplinary programs did at least as well as, or better, than students in traditional programs, indicating that such a bridge was possible. We felt that integrated curriculum bore greater investigation and that, despite its hundred year history as a method to address problems with a perceived lack of relevance for students (Wraga, 1996), there was still a great deal to be learned about the successes or failures of integrated curriculum. We chose to use Drake's KNOW, DO, BE model (2001) to integrate an entire year's curriculum (see Figure 1). The KNOW portion of the model consists of concepts and essential understanding across disciplines. The DO portion of the model defines the interdisciplinary and disciplinary skills that students will use and develop. The BE is how we want students to be during the unit. I was particularly excited about the DO and BE component of this model as they seemed to address Daniel Goleman's (1996) notion of emotional intelligence. Goleman

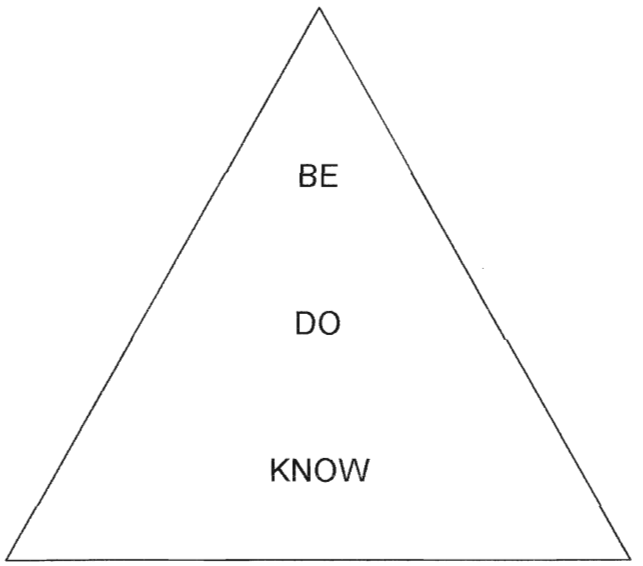

Figure 1. KNOW, DO, BE model
Note. From "Castles, kings … and standards," by S.M. Drake, 2001. *Educational Leadership, 59*(1), 38-42. Copyright 2001 by Susan Drake. Reprinted with permission.

argues that human competencies, like self-awareness, self-discipline, persistence, and empathy are of greater consequence than IQ in much of life and that children can, and should, be taught these abilities. The DO and BE portions of the model address these abilities as they include life skills, social skills, values, and habits of mind, along with the more traditionally valued intellectual intelligence suggested by the KNOW component. The model allows for values based or character based education because of the BE that sits at the pinnacle. At the time, I wrote:

> *I must go beyond the "basics" and develop the kind of critical curriculum we are developing, one that invites students to examine social, political, or environmental issues. McNeil (1995) writes that the goal of a critical curriculum "is to empower students to build a just and equal society at peace with itself and other nations and the environment" (p. 72). As I read more on critical curriculum I believe my desire to involve my students in real-life social projects that make multidisciplinary and integrated curriculum necessary is yet another reason I have initiated this project.(Journal, 2002)*

During our 5 months together, our curriculum team worked together to use the KNOW, DO, BE model to write an integrated curriculum covering nearly all of the expectations for the grade 4 year. During this time, we wrestled continuously with a number of living contradictions as we discovered that we often held two mutually exclusive opposite values (Whitehead, 2000). We expressed these as a series of dichotomies:

- Theory vs. Practice
- Teaching for Understanding vs. Teaching for the Test

- Assessment for Accountability vs. Assessment for Understanding

(Drake, Upton, Phillips, & Rubocki, 2002)

As a result of our discussions, the model took on many new faces. Eventually, it was determined that the BE component of the model was actually the bridge that allowed students to connect knowledge and application and the model took on a new face, as is seen in Figure 2.

As I worked with Susan Drake, and this new model, I returned to my initial philosophy:

> *And although the debate surrounding integrated curriculum continues to rage, I am confident that some day integration will again return to the forefront of educational thinking. After all, the concept of integrated curriculum is not new. The original advocate of a holistic, child-centred approach was John Dewey. This approach is emphasized in Dewey's work (1956), which critiqued learning a subject in isolation: "It was segregated when it was acquired and hence is so disconnected from the rest of experience that it is not available under the actual conditions of life" (p. 49). Since Dewey, supporters of integrated curriculum have weathered many attacks. Yet, there is still a great deal to be learned about the successes or failures of integrated curriculum...When the pendulum of educational reform swings once again, allowing for a more holistic approach, I intend to be the first in line to participate. (Journal, 2002)*

Despite our satisfaction with developing a new face for the KNOW, DO, BE model and planning a number of units and activities that integrated almost all of the expectations, we all realized that what was lacking in this curriculum was quality assessment. We felt that we had followed Wiggins and McTighe's (1998) dictates

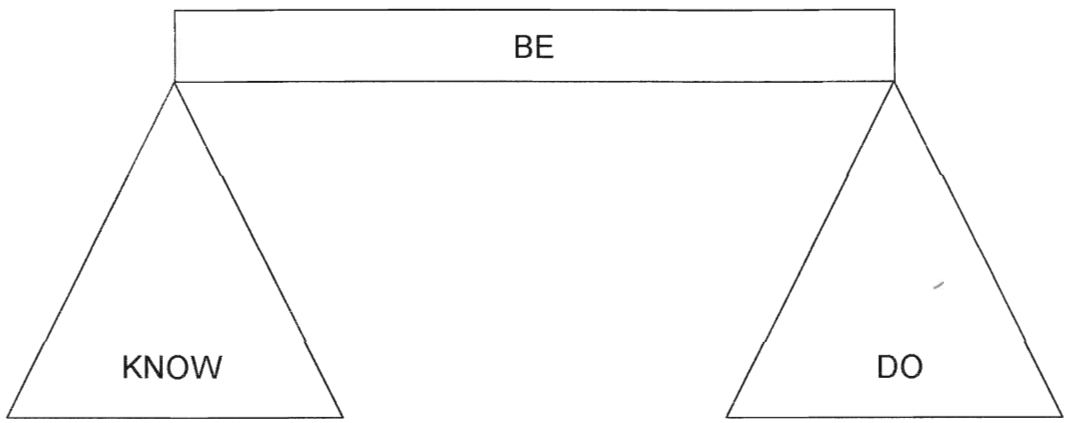

Figure 2. KNOW, DO, BE bridge (Drake & Burns, 2004)
Note. From *Meeting standards through integrated curriculum*, by S.M. Drake and R. Burns, 2004, Alexandria, VA: Association for Supervision and Curriculum Development. Copyright 2004 by Susan Drake and Rebecca Burns. Reprinted with permission.

regarding backwards design which include identifying the important understandings or big ideas you want students to learn by developing essential questions and focusing on the key content and skills you want students to learn and planning learning experiences that help students understand new knowledge and skills and help them demonstrate those understandings. We had identified enduring understandings and developed a culminating task before designing lesson activities, yet, we had failed to address the third principle of backwards design which focuses on determining acceptable evidence of understanding with assessment tools and performance tasks that allow students to apply what they have learned in a new context. We had not identified how we would assess the task, or, indeed, any of the tasks planned. Time was often the obstacle. Time, specifically the lack of it, arose as a common theme and a common complaint (Drake et al., 2002). Quite simply, the process of designing quality curriculum takes an extraordinary amount of time. In an attempt to ground our curriculum in the standards, we had begun by grouping expectations and identifying those that were most important. This is, of course, the first step in good assessment. One must make sure that the assessment is valid, in other words, that it measures what it is intended to measure (Woolfolk, 1995). Yet, it takes a great deal of time merely to identify the most essential of the standards, as I expressed in my journal:

> *Susan is being unrealistic in asking teachers to horizontally and vertically map the curriculum and identify the essential understandings. While I see the value in this task I think this must be a job for curriculum consultants rather than teachers who are already stretched too thin. (Journal, 2002)*

Once a teacher has identified what he or she is going to evaluate, the equally important question of *how* remains. Santrock, Woloshyn, Gallagher, DiPetta, and Marini (2004) suggest using a variety of traditional methods including objective selected response tests, such as multiple choice, fill in the blank, true false or matching items and constructed response tests, such as short answer and essay questions with careful planning to discourage bias in scoring. They encourage using multiple assessment methods and point out that there are also many newer, more innovative approaches to consider. Smith, Smith and Lisi (2001) write that

> the revolution in assessment that has occurred in the past 10 years has generated a lot of new names for assessment. These include alternative assessment, authentic assessment, performance assessment and portfolio assessment...recently there has been a dichotomy set up in educational literature that pits teacher-centered instruction against student-centered instruction. (p. 20)

A would of newer approaches would include, alternative assessment is usually used in reference to any assessment technique that differs from traditional assessment. This would include the use of rubrics to evaluate student work. A rubric is an assessment tool characterized by a series of statements describing the criteria for levels of achievement of a process, a product, or a performance (Airasian, Engemann, & Gallagher, 2007). I had had some success using rubrics but had found the process of creating rubrics time consuming. Further, I felt that for many students a few personalized handwritten comments would provide more guidance than highlighted sections of a generic rubric. I found that rubrics were most useful when given out before the task because they helped students identify what they needed to be able to do to demonstrate

the skill, but, upon completion of the task, students needed more specific comments to improve their work. This is consistent with the current discussion on assessment (e.g. Black, Harrison, Lee, Marshall, & William, 2003) and is discussed in detail in Chapter Five.

Authentic assessment revolves around something meaningful for the student, and can include performance assessment, which requires the child to complete a given task and tends to involve higher order thinking skills (Airasian et al., 2007). I had attempted to utilize performance assessment but found that it can be challenging to organize in a classroom with close to 30 learners. In fact, time constraints and class size are cited as two of the most common obstacles to implementing performance assessment (Bell & Bell, 2003). Portfolio assessment is also used as an authentic assessment tool. This refers to using a collection of student work to assess growth, skills, or abilities (Stader & Hill-Winstead, 2002). It is a "window on learning that allows you and your students' parents to see inside the learning process" (Cooper, 2007, p. 166). I had dabbled with portfolio assessment and had discovered that students enjoyed the process and parents found it informative. However, I had not yet found an effective way to organize it or to link it directly to the report card.

All in all, I was uncomfortable with traditional assessment because it did not seem to fit my values, but also uncomfortable with more innovative approaches because I could not seem to master them. Further, I seemed to be stuck framing assessment strategies as either progressive, which I viewed as synonymous with "good" or traditional, synonymous with "bad" in my eyes. Perhaps, at the time, this either/or thinking contributed to my "paralysis of analysis", a term coined by the business community to

refer to the trade-off between expressing requirements in a way that others can understand and creating unmanageable amounts of work in producing systems of analysis.

Nevertheless, I returned to my classroom for the 2002-2003 school year with new confidence and excitement. I began the year with the Canada unit developed with Drake et al. (2002). I intended to develop assessment tools to go along with the lessons as I taught the unit. In the end, though, assessment was largely an afterthought as I found my planning time was expended on simply implementing the unit. Students enjoyed most of the lessons but often seemed frustrated when completing the complex tasks assigned because they were required to synthesize a great deal of information. When I asked my students how they felt about the unit and suggested they be involved in developing generative ways to study topics, I found that students did not want to do it this way. Instead, they preferred to read books and answer questions. I balked at this.

In the past, I had settled for this method of teaching when I found myself overwhelmed. Yet, I had found that students could do well on a unit test when they were taught by the text, but they did not retain information a week later. I felt that I was teaching too much to the test and not enough for lifelong understanding. Yet, as the integrated unit progressed I discovered that I was, in fact, teaching to the task in much the same way that I had taught to the text and test in years previous. The only change was that it was a task I had designed. I realized that in planning these tasks I had been too focused on drawing links between the content of various subject areas and not enough on developing skills in an developmentally appropriate manner. Thus, many of the thinking skills and learning strategies that had been at the forefront of my discipline specific

lessons had been lost. Some of the tasks demanded that students use skills and strategies they had not yet learned in class. For example, while "traveling" across Canada, students were being asked to calculate distance and elapsed time without having any previous experience. Worse, I was expecting that students complete complex tasks when I had not explicitly taught them *how* to ask questions, *how* to read to learn, *how* to research, *how* to carry out an investigation, *how* to work in groups, or *how* to solve problems. I was forced to breeze over many thinking and learning skills so that students could complete the task. I doubted that students retained the material any more than the material from the text, but I optimistically hoped that students had learned some of these transferable skills (albeit haphazardly). Oddly enough, although I believed that integrated curriculum would help me to teach real-life skills that would prepare my students to live in an information age, my poor application of it left teaching students how to be learners behind.

I believe that, as a teacher, I am a cognitive guide for students who are trying to make sense of these tasks and that it is my duty, as a guide, to provide the tools and strategies that will help students learn and discover. As Nisbet (1990) comments, the concept of guiding learning through teaching students how to think and learn is not new. Yet, the term 'thinking skills' remains largely undefined and is often used ambiguously and/or interchangeably with 'learning strategies.' Alvino (1990) defines thinking skills as "the set of basic and advanced skills and subskills that govern a person's mental processes. These skills consist of knowledge, dispositions, and cognitive and metacognitive operations" (p.50). However, there is no consensus as to what should be included in the category of 'thinking skills' (Wilson, 2000). Often, the term includes 'higher level' activities such as problem solving, decision making, critical thinking,

logical reasoning and creative thinking (Nickerson, 1988), but as McGuinness (1999) points out, different researchers have produced different taxonomies of thinking. Wilson (2000) writes that:

> Most [researchers] include some or all of the following:
>
> - collecting information
> - sorting information
> - analysing information
> - drawing conclusions from the information
> - 'brainstorming' new ideas
> - problem solving
> - determining cause and effect
> - evaluating options
> - planning and setting goals
> - monitoring progress
> - decision making
> - reflecting on one's own progress.
>
> All are based upon the assumption that thinking (cognition) goes beyond the acquisition of knowledge (ie Ryle's, 1962, 'knowing that') and include the process(es) of knowing about thinking (metacognition) i.e. being able to reflect on the processes by which learners process information (para. 2.3).

While the Canada unit demanded that students use many of these thinking skills, the lessons developed did not explicitly teach these essential skills. The lack of

metacognitive skills was particularly troubling, as one of the essential skills students must possess in order to be successful in problem-based learning activities is metacognition (Hill & Hannafin, 1997). Metacognition is the awareness and understanding of one's self as a thinker or "knowing about knowing" (Santrock et al., 2004). Expert problem-solvers, and effective thinkers plan strategies for attacking thinking problems. Their ability to analyze the situation and reflect on their thinking are their metacognitive skills.

A learning strategy is an individual's approach to complete a task including his/her way of organizing and using a particular set of skills in order to learn content or accomplish other tasks more effectively and efficiently in school as well as in the world outside the school (Boudah, 1999) Therefore, instead of teaching content or curriculum specific skills, teachers who teach learning strategies teach students *how* to BE learners. Instead of being afterthoughts, these thinking skills and learning strategies should have been infused and explicit in every lesson, the content merely a vehicle.

I also discovered that I was extremely uncomfortable assessing many of the integrated learning tasks and struggled to make them mesh with the standardized report card I was forced to write. At times, this meant I shied away from implementing full-scale integration and, instead, settled for theme-based connections when, and if, they arose, despite that fact that I had questioned the value of this type of integration in the past:

> *The most damaging potential of integrated curriculum is its simplistic misapplication. Material is often trivialized, and connections are superficial or inconsequential, watering down the educational significance of the material or making the material to be learned more confusing for students it is unlikely that*

understanding will be increased as they contribute little to an understanding of each other. Further... students are often unable to make connections across these themes thus vertical integration is often sacrificed for increased horizontal integration (Case, 1994). (Journal, 2002)

I served as junior division leader during the school year of 2003-2004. Consequently, I had an opportunity to work with the seven other teachers in my division to organize a cross-graded integrated unit. These teachers are a diverse group and some misconceptions regarding accountability dominated our meetings together. There was a general animosity towards the buzzword of "accountability" and the public notion that test scores are the only way to hold teachers accountable. Many resented that their broad curriculum, creative energy, and attention to the needs of individual students seemed to go unnoticed by much of the parent community and school administration while provincial test results were lauded and used to develop improvement plans. While some were already using many integrated activities, others felt that, in order to be meet these demands for accountability, they must check off expectations as they taught them. Still others felt that the expectations must be written in student planners alongside homework assignments and listed prominently at the top of tests and assignments. A few worried that integrated curriculum wasted class time because, as they saw it, integrated curriculum consisted of fun activities that left little time to teach the curriculum expectations. Ultimately, I was able to get the other teachers in the division interested, but, I failed to initiate the actual curriculum design planning and we did not proceed with the unit. Upon reflection, I realize that I prevaricated because I felt uncomfortable

stepping into an "expert" role, taking on the leadership and responsibility for the project when I had not felt successful with the two units I had implemented the previous year.

Background and Rationale

The primary motivation for this project was the desire to reexamine my beliefs and practices about planning and assessment and to align my practice and beliefs by creating rigorous, meaningful assessment appropriate to the lessons and activities I plan daily. However, I think the time is right to examine the issues of planning and assessment not only for me, but also for the larger educational community. Standards, assessment, and accountability have dominated the talk in many preservice classes and staff rooms. The dominance of accountability on the agenda of education would likely lead one to assume that a lot is known about the effects of school accountability. Yet, Fuhrman (1996) writes that "much current policy...assumes a great deal about how the strategies actually work and how [educators] are likely to respond" (p. 332). Leithwood, Steinbach, and Jantzi (2000) sum up our knowledge best:

> Educators (and parents) are a diverse group and are likely to respond in diverse ways to the same accountability initiative. Furthermore, while empirical evidence about the effects of some accountability tools has grown in the past few years (eg. Lauder & Hughes, 1999, Lee, 1993; Leithwood & Menzies, 1998), in reference to the broad array of such tools currently in use it would be safe to say that 'we don't have a clue.' (p. 4)

There is a need to study the experiences of teachers, particularly beginning teachers, working in this climate of accountability. A survey distributed among 1st-year

teachers in Ontario found that 39% of these teachers were highly stressed (Ontario College of Teachers, 2003). I, too, experienced a high level of stress in my first year, caused primarily by concerns about planning, assessment, and accountability. Many beginning teachers who experience overwhelming levels of stress may consider leaving the profession at a time when Ontario is facing a teacher shortage. In 1999, it was estimated that 20% of public school teachers in the United States left their positions within 3 years (Recruiting New Teachers, Inc. 1999). A more recent study claimed that teacher attrition was a "serious problem" and that approximately 46% of teachers leave the profession in the first 5 years (Ingersoll, 2002).

Some of the stress may be linked to the current climate of change in education. As Lorna Earl (2003) writes:

> Educational reform in the past decade has felt like a roller coaster ride for most teachers and school. Schools reflect the changes that are occurring more broadly in society, and there seems to be no end to the changes (economic, cultural, political, and socio-economic). (p. 1)

For all teachers, but particularly for beginning teachers, this is a confusing time. The importance of accountability is being constantly stressed and, yet, they are caught in the middle of "what often appear to be conflicting and countervailing demands, struggling to maintain their balance" (Earl, p. 1). The emphasis at Faculties of Education is on progressive teaching methods, however, many a veteran teacher told this beginner that traditional methods make it easier to 'cover' the expectations. This work is about questioning my own beliefs and practices and finding my own balance.

For much of the last century, education focused on specific, discrete skills and facts (Earl). With time, this behaviourist view was challenged by the social constructivist view that learning is shaped by prior knowledge and cultural background (Earl). Currently, "teachers are expected to attend to both the demands of a fixed school curriculum generated by cultural/societal demands and to the needs of individual children with varied understandings, backgrounds and interest who make up a class" (Earl, p. 2). Katz, Earl, and Olsen (2001) have suggested that this is a source of teacher stress as teachers are caught between the expectations of educational policy influenced by society and the notion that students construct their own meaning and view of the world. While some researchers have tried to blend these perspectives and provide a new lens (e.g., Drake & Burns, 2004), you will see in the following chapter that many questions and gaps still exist.

I hope that by charting my journey as I reexamine my beliefs and practices about planning and assessment I may provide useful insight for other teachers, beginning and experienced, who are also struggling to find their balance on the roller coaster of educational reform.

Statement of the Problem Situation

The purpose of this study is to investigate the question: "How can I improve my practice as a classroom teacher and contribute to the professional knowledge base?" Whitehead (2000) suggests that by simply asking the question "How do I improve my practice?" one must exercise originality of mind and critical judgement of educational theories and the use of values as educational standards. Specifically, this study addresses the following dichotomies that arose from my earlier work with Drake et al. (2002):

1. Theory vs. Practice

- *How can educational theory guide my practice?*
- *How can my practice guide my own living theory?*

2.Teaching for Understanding vs. Teaching for the Test

- *How can I balance traditional and progressive views of curricula?*
- *How can I find the appropriate balance that ensures that curricula serves as a visible target for learning, that students make connections among the concepts and skills they are learning and that students develop habits of mind defined as "broad, enduring and essential life-span learnings?" (Costa & Kallick, 2000, p. xiii)*

3. Assessment for Accountability vs. Assessment for Understanding

- *What pressures/challenges did/do I face as a teacher in a climate of accountability?*
- *How can I balance traditional and progressive views of assessment?*
- *How can I best bridge accountability and relevance?*

CHAPTER TWO: THE OLD STORIES

Traditional and Progressive Views

"On Saturday, he ate through one piece of chocolate cake, one ice-cream cone, one pickle, one slice of Swiss cheese, one slice of salami, one lollipop, one piece of cherry pie, one sausage, one cupcake and one slice of watermelon. That night he had a stomachache."

~Eric Carle's Very Hungry Caterpillar

"If a little knowledge is dangerous, where is the man who has so much as to be out of danger?"

~-Thomas Henry Huxley

This century began with a clash of ideals between progressive educational theorists, such as John Dewey (1959), and traditionalists who felt that the basic curriculum had proved essential and beneficial to society and should not be changed (Pinar, 2004). Traditional theorists value constancy and worry that change threatens centuries of knowledge and culture. They believe that a better future can only be built on a solid base of past achievements (Walker & Soltis, 1992). Progressive educators hold varied views: some advocate a more scientific approach to education; some are interested in social reform and work to improve education for lower class children; some are pedagogical innovators who want North American curriculum to reflect the international practices they study (Walker & Soltis). What progressive educators continue to have in common is a desire for change (Walker & Soltis). Hayes (2006) argues that, despite the "back to basics movement", mandated curriculum standards, high stakes testing, and accountability initiatives, progressive education is still a viable approach. I have agreed

and throughout my teaching career have aligned myself with the progressive camp. However, at the time that I was beginning this work I had started to express dissatisfaction with this philosophy:

> *Yet, perhaps, I have become too flexible, embracing change simply because it is change without really examining the issues. I know I also denied the complexity and difficulty involved in making changes and rather arrogantly assumed that change had simply not been approached in the "right" way. I thought it could be quick, efficient and linear if there was a strong leader to guide the process. (Journal, 2002)*

Change is complex in a system where schools and classrooms must conform to the same conditions as a century ago:

> i) School calendars are organized around the assumption of agrarian lifestyles.
>
> ii) Schools operate based upon conditions that were prevalent during the industrial age—mass production and employee conformity…
>
> iii) Students follow a lockstep structure of 12 years of "schooling"…
>
> iv) School schedules are structured as if mothers were home to greet their children in the mid-afternoon and as if nuclear families were the norm.
>
> v) Student progress is measured through unit accumulation, a practice designed at the beginning of the twentieth century.
>
> vi) School curricula are sequenced or articulated from one grade level to another, but teachers determine what to teach and how to teach it.
>
> (Lasley, Matcynski, & Rowley, 2002, p. 10)

At the same time, it would be ridiculous to suggest that because change is difficult, education must look as it did in the early 1900s. Research data exists concerning the teaching-learning process and teacher expectations (Wenglinsky, 2000) and should be heeded. Yet, it is difficult for many teachers to find the time to make sense of the abundance of data. I felt that I was suffering from "information overload." I recognized the importance of each decision I made as a teacher and wanted to make sure that I was doing the best I could for my students. Yet, there seemed to be so many ways I could improve as a teacher--so many things I had learned but had not yet incorporated into practice, so many things I had not yet learned. There were times I would look longingly at the teacher who left the school building each day just after the bell talking of golf, while I sat at my desk struggling with how best to teach my students long division. I expressed my frustration during a phone call to a friend, also a former Child Studies major, telling him how I sometimes longed to accept "mediocrity." He echoed my same sentiments saying:

> *Sometimes I think we know too much about kids and how they learn. Maybe if we had done our degrees in history or math or geography and had then gone to teacher's college, we could content ourselves with just teaching the subject matter, but I have to mess things up by thinking about weird stuff like the importance of humour to cognitive development. (Phone Conversation, November, 2004)*

I do not mean to suggest that teachers whose undergraduate degrees are discipline specific are any less reflective or competent, merely to illustrate the point that, just as a little knowledge can be a dangerous thing, too much knowledge can bring us to our

knees, mired in a "paralysis of analysis", creating unmanageable amounts of work and worry. Further, teachers often find themselves at the whim of provincial or state reforms.

As I was writing this paper, I became aware of the fact that the dichotomy of traditional and progressive curriculum is not unlike the whole language versus phonics debate that raged in education 20 years ago. This was the climate of change that my mother experienced and her solution for managing the change was surprisingly simple: find a middle ground. I have always agreed. In my opinion, the key to literacy is balance. Sadly though, with regard to whole curriculum planning, I had fallen into the trap that many educators fall into. According to Lasley et al. (2002), "many teachers and reformers assume that student-centred culturally relevant teaching is universally good, while teacher-centred content-focused teaching is inherently negative" (p. 26). They contend that effective teachers find a balance that encompasses both views. I believe that this lack of balance was responsible for my dissatisfaction in the past and that through consciously seeking to find a balance between student-centred and teacher-centred foci within my curriculum plans and instructional/ assessment practices I can improve my practice.

The Call for Reform

I believe that many teachers are looking to find balance as they struggle to meet the demands of standards-based education and the individual needs of students in the classroom (Earl, 2003). As Hargreaves and Goodson (2006) write, the past decades in education have brought many reforms and even more questions:

> For more than three decades, in the field of educational administration there has been intensifying interest in the problem of educational change (Fullan, 1982; Sarason, 1972), in why teachers resist it (Datnow, 2000; Gitlin & Margonis, 1995;

> Hargreaves, 1994; Huberman, 1992; Lortie, 1975; Rosenholtz, 1989) and in why it is difficult to "diffuse" innovations (Havelock & Havelock, 1973) and generalize or "scale up" reforms (Datnow, Hubbard, & Mehan, 2002; Elmore, 1995; Stein, Hubbard, & Mehan, 2004) beyond pilot projects or from one school or district to others. Educators appear to know how to create islands of change but not how to construct archipelagoes or build entire continents of them (Hargreaves, Earl, & Ryan,1996, p. 4)

The question for me, though, is how to appropriately respond to change without becoming a victim of it by losing sight of my personal epistemology and research-based practice. Certainly, over the course of my mother's 36-year teaching career, she saw the pendulum of reform swing to both extremes. I have been particularly cognizant of the political issues surrounding reforms in the educational community as I entered the concurrent Child Studies/ Education program and began my teacher training in 1995—the year that the Conservative government resumed its reign in Ontario and began making sweeping changes to the educational system.

My mother began teaching in Niagara Falls, Ontario in 1958. She was inspired by her grandmother, who taught in a turn of the century one-room schoolhouse. The province had been under the thumb of a Conservative government for 15 years, a government my great-grandfather served as a member of provincial parliament from 1951-1955. Despite Earl and Torrance's (2000) assertion that, prior to the 1990s, Ontario had almost no history of large-scale assessment and none with high-stakes for students, schools, and districts, I would argue that it was a time of highly standardized curriculum and high-stakes testing (at least for students). Content and sequence were prescribed in

"the little grey book" that had been first published in 1937 (Gidney, 1999). Although less than a quarter of students completed grade 13, those that did wrote system-wide "departmental" exams at the end. These exams were set by the province and were the only source of evaluation used to determine promotion. Individual results of these 3-hour examinations were even published in the newspaper (Gidney, 1999). It was a time when Hilda Neatby (1953) of Alberta was still receiving press coverage with the publication of *So Little for the Mind*. In this hotly debated book, Neatby made a case for "back to basics", stating that progressive education had abandoned all standards of rigour, had debased the most worthwhile subjects, and had contributed to the decline of social, ethical and political values (Harrison & Kachur, 1999).

Progressivists had been provoking controversy since the 1920s. They advocated many reforms of public education including:

> ...the reform of the program of studies to give less emphasis to the traditional academic subjects...more vocational education, for example, more concern with contemporary problems and issues, more education in life skills, all of which would better prepare young people for the 'real world'. Progressives also pointed out that 'the whole child goes to school'—this is to say, the school must take responsiblity for not just the child's intellectual development but his or her social, emotional, and physical growth as well. Learning to read mattered; but so did the cultivation of good health habits, the ability to get along with others, and the child's self-esteem...The curriuculum must focus on the interests, needs and ablities of children; must actively engage them in the learning experience; must provide for individual differences in learning styles and the pace at whcih

> learning take place. Self-directed learning was critical as well. (Gidney, 1999, p. 31)

Truthfully, though, progressivists were making little headway in Canada and even fewer inroads in an Ontario ruled by a Conservative government (Gidney).

When I told my mother I was studying educational reform, her first question was: "Did you look at the Hall-Dennis report?" She holds this report responsible for big changes that occurred in educational thinking just a decade into her career. Hall-Dennis (The Report of the Provincial Committee on Aims and Objectives of Education in the Schools of Ontario, 1968) focussed on child centred techniques and criticized traditional teaching methods. Teachers were seen as guides rather than authoritarian leaders. The focus was on "learning how to learn" and there seemed to be a promise that with the right programmes and the right teachers, all children would meet with academic success:

> Education is the instrument which will break the shackles of ignorance, of doubt, and of frustration; it will take all who respond to its call out of their poverty, their slums and their despair; that will spur the talented to find heights of achievement and provide every child with the experience of success. (The Report of the Provincial Committee on Aims and Objectives of Education in the Schools of Ontario, 1968, p. 9)

This promise was to be brought to fruition by classroom teachers, who were seen as guides facilitating the learning process:

> Attacks on this problem [poverty] are taking place in a handful of "inner-city" schools serving socio-economically disadvantaged neighbourhoods. In such schools, one can see poorly-clad youngsters talking and moving about easily in

> colourful classrooms stimulated and taught with the most technical and sensitive skills by dedicated and patient teachers who are guided and supported by crusading principals. (The Report of the Provincial Committee on Aims and Objectives of Education in the Schools of Ontario, 1968, p. 39)

The Hall-Dennis report was widely accepted. The progressivists finally had a foothold in Ontario.

By 1971 my mother had been teaching in the same school for 12 years. Total expenditure on education had risen dramatically and now accounted for some 32.5% of the provincial budget, compared to a mere 16% in 1950 (Gidney, 1999). Some of this money was used to tear down the school my mother was teaching in and to build a new school, on the same piece of land. That year, Robert S.K. Welch, then Minister of Education, cut the ribbon marking the opening of the new open-concept school, where, instead of a stand-alone classroom, she shared a "pod" with three other teachers. This was not the only change she faced. The principles of ungrading, continuous progress, integrated studies, and discovery learning were starting to take hold and Welch was declaring that:

> ...the philosophy underlying these changes is very different...we can no longer identify the specific skills and knowledge that students must possess...I expect you to work as quickly as circumstances allow toward the expression in educational practice of the philosophy expressed (Welch, 1972 cited in Gidney, 1999, p. 83).

By the early 1970s, the pendulum undeniably hung in the progressive camp but public dissatisfaction with education was growing. Robert Nixon, elected leader of the

opposition in this year, began to make a call for "back to basics" education with fewer "frills":

> ... global developments such as high unemployment, the OPEC crisis, and the rise of Japan in world trade made Ontarians take more seriously... education that went "back to the basics" and ensured employability...the Ministry of Education...in 1976, announced that it would revise Ontario's curriculum guidelines to get a firmer grip on their content, making them more prescriptive and more practical. The Ontario public seemed to believe that the best response to global change was...the implementation of standards and rigour. (O'Sullivan, 1999)

Ontarians were becoming increasingly disgruntled with the education system.

This discontentment continued into the 1980s. The year 1985 saw the fall of the long-standing Conservative government in Ontario and an increased use of education as a political platform (Gidney, 1999). Britain and the United States were in the midst of educational reforms, particularly after the U.S. publication of *A Nation at Risk* in 1983, which warned that American education faced a "rising tide of mediocrity" unless actions were taken to raise expectations and achievement (National Commission on Excellence in Education, 1983). This report ushered in an era of debate and reform in American education, and was an impetus for the standards-based movement. Ontario, under the NDP Rae government, seemed to be out of sync with the rest of the Western world. According to O'Sullivan (1999), the government announced that it would be moving forward with three major progressive reforms in 1992: de-labelling (integrating students with special needs), de-streaming (no ability streaming in high schools), and de-coursing (courses would be integrated into four core programs areas). A huge public outcry forced

politicians to acknowledge the perceived flaws of the educational system and Ontarians soon followed the call for educational reform.

In 1993, the Province of Ontario established the Royal Commission on Learning to examine the purpose and direction of Ontario's school system. In one of the most extensive pubic consultations ever undertaken in the history of Canada, the Commission held province-wide discussions with educators, policy makers, parents, students, and tens of thousands of citizens (Green, 1998). After exhaustive public consultation, the Commission released its report, entitled For the Love of Learning, in January 1995. In this report, the Commission made 167 recommendations for educational reform in the areas of teacher professionalism and development, community alliances, early childhood education, and information technology (Royal Commission on Learning, 1994). Of significance to this work, the Commission recommended that an independent, arm's-length testing agency be created called the Office of Learning Assessment and Accountability. It recommended that all schools create a school-community council, with staff, parents, students, and community representatives, to better link school and community. Among the curriculum recommendations were assessing literacy and numeracy skills through province-wide tests in grades 3 and 11. The final version of The Common Curriculum was also released in this year. It established specific outcomes for grades 3, 6, and 9 and identified 10 essential cross-curricular learning outcomes (Ontario Ministry of Education and Training, 1995). My mother retired from teaching in 1994, thus, she never got to see how these developments impacted education. I, however, was just beginning my teacher training in the concurrent Child Studies/Education program.

These documents were discussed and debated extensively in my coursework and would greatly impact my teacher education.

In 1995 Ontario was no longer under the rule of the NDP. Ontario's new Conservative government, led by Mike Harris, began to forge ahead with many of these reforms, which were "remarkable in scope, in the sheer speed of execution, and in the turmoil they engendered" (Gidney, 1999, p. 234). A framework for educational reform, outlined by Shantz (2002), provides some insights into how change is ideally addressed and illustrates how far from "ideal" the Harris reforms were. She begins by citing the work of Fullan (1993). This work argues that the involvement of teachers is essential in planning and implementing long term, meaningful change. Both the What and How of the changes need to be addressed and viewed in relation to meaning for both the individual and society (Fullan). Shantz writes:

> Unfortunately in Ontario the implementation process has been non-existent with edicts coming from the province, with inadequate resources and with virtually no inservice. The values, goals and consequences of the reforms have not been addressed and the dynamics of the changes totally ignored. Fullan (1993) raised a number of questions about the key components of change: What values are involved in the change? Who is initiating the change? Who will the change benefit? Is the change a priority? For whom? By addressing this change what other areas of potential change are being neglected? How sound or feasible is the idea and approach? Unfortunately none of these questions have been openly addressed or discussed with the educational community. (p. 2)

Shantz also relates Ballantine's (1997) three approaches to change: (1) the structural-functional approach which attempts to create stability and avoid change; (2) the conflict approach which sees change as a result of crisis and maintains order with power and force and; (3) the open-systems approach that views change from a different perspective, and sees change as a normal part of the system, inevitable and ever present. She argues that the Ontario government has approached change using the conflict approach by creating a crisis and then using their power to control the system. She states that "this has created unhappy, disempowered teachers whose morale has plummeted to a new, low level" (Shantz, p. 2). This was the climate of the schools as I began my career in teaching.

The Education Quality and Accountability Office (EQAO) was established in 1995. As Volante (2007) comments, it is interesting that EQAO has continued to receive support for its mandate despite the change in governments:

> ... EQAO was initially conceptualized under the tenure of the NDP, was created and funded by the PC's, and is now operating in partnership with the current Liberal government. Thus, despite the rhetoric, the continuities of the PC education policy are more striking than it discontinuities, and mimic broader trends across North America (Genesis of EQAO, para. 3).

Currently, EQAO administers tests in literacy and numeracy to students in grade 3, 6, 9, and 10. There are three main objectives for these assessments: 1) report on results of the test(s); 2) report of the quality and effectiveness of education; and 3) report to accountability boards (Wolfe, Childs, & Elgie, 2004). These tests were developed with

input from the many groups involved in education and teachers across the province. They contain both multiple-choice and performance-based questions and are conducted in the spring of each year. Having administered the grade 3 EQAO, I would agree with Earl (1999) that these tests provide useful feedback for instructional decision making and help to identify areas for future action. Yet, I would also agree with Volante (2007) that

> ... the current basis for judging educational quality and accountability in Ontario is flawed precisely because the province has adopted a myopic view that overemphasizes provincial assessment scores. This is despite the fact that many forms of test reliability and validity have yet to be examined within the provincial assessment system. (Conclusion, para. 1)

The Harris government also took complete control of the elementary school curriculum beginning in 1997 when it introduced new Grade 1-8 Math and Language curricula containing a detailed list of mandatory expectations. Similar documents for each elementary school subject soon followed these documents. The emphasis on values, equity, and antiracism that shone through in The Common Curriculum was gone (O'Sullivan, 1999). In 1998 the government created one report card for all elementary schools in the province. Standardized report cards were supposed to bring some uniformity and rigour to the process.

Many educators, like me, were left wondering how to meet the demands of standards-based education and the individual needs of students in the classroom in this new era of accountability. Many struggled to cope with these sweeping changes and to align their beliefs with this accountability-driven environment. It seemed like the pendulum had swung firmly into the traditionalist camp and there was little opting out.

Advocates of holistic, integrated learning despaired that developing integrated curriculum was not possible in the new era of standards. (Weilbacher, 2001). The academic community struggled to make sense of these changes (Drake & Burns, 2004).

Harris's government was defeated in 2003 by the Liberals, under the leadership of Dalton McGuinty. At this time, I was serving on the local executive for the Elementary Teacher's Federation of Ontario and saw that McGuinty, who made many promises to improve public education, had significant support from the teachers' unions. In the 3 years following the election, his government delivered on their promise of more funding (although according to critics it has not always been enough or invested in the right places) but mandated curriculum, province-wide testing, and a standardized report card remained. In 2007, "accountability" is still high on the educational agenda.

The Projected Story

I must ask myself: What will happen if I continue to embrace a progressive, holistic, constructivist, integrated approach to learning in a climate of accountability and standards? This is not an easy story to project. Over the course of my career I expect that the pendulum of education will swing again. However, I believe that it is important to find my own balance between the traditional and the progressive views, based on research-based effective practices. My review of educational reforms these past 30 years has shown me the extent that policy can fall at the whim of politics. I feel that I need to find my own balance point based on research based practices and I need to align my knowledge and practice so that I can find some contentment in my teaching practices. Although change is essential to improvement, not all change is good. Further, the process of change is tiring and I will eventually burn out. If the larger educational community

does not solve this same dilemma, teacher stress levels and defeatism will continue to increase, job satisfaction will decrease, and my children are likely to have less effective teachers. Already, other young teachers cite stress and dissatisfaction as reasons to leave the profession. This recognition is the greatest impetus for this project.

The Projected Ideal

My ideal story would be one in which I develop a model of curriculum design that makes sense to me and provides a balance between traditional and progressive instruction and assessment within the context of standards based education. The answer, I think, lies in the common-sense deduction that all strategies will work some of the time, but that no strategy will work all of the time. The question then is how to find an appropriate balance.

CHAPTER THREE: THE METHOD

Roots of the Methodology

"The force is all around us, it connects all things."

~Yoda from George Lucas' Star Wars

"All truths are easy to understand once they are discovered;

the point is the discover them."

~Gallileo Galilei

My research is a self-study into my own learning and knowledge-creation as I ask the question, "How can I improve my practice?" Through examination of my stories, I attempt to identify the values and critical events that have helped me to shape my professional self. Secondly, I retell, and, thus, in some way relive, my own "living contradictions", those times when my values and practice contradict each other. In this chapter I trace the process that allows me to make meaning out of the data archive that I have collected and reflected upon over 7 years as a teacher. I explain why I selected qualitative research, how I came to realize that I was developing my own living educational theory and why a narrative-autobiographical self-study seemed the best way of uncovering my living theory and presenting my reflection/actions. I then clarify the problem statement, refining the research question. Finally, I lay out my process for analyzing the data, dealing with ethical considerations and dissemination.

Qualitative Research

The first decision that any researcher must make is whether to pursue his or her research question(s) through quantitative or qualitative channels. Researchers have long debated the relative value of qualitative and quantitative inquiry (Patton, 1990).

Qualitative research uses a naturalistic approach that seeks to understand a phenomena in context-specific settings. Qualitative researchers are interested not in prediction and control but in understanding (Pinnegar & Daynes, 2006).They tend to use a wider lens, whereas, quantitative research uses experimental methods and quantitative measures to test hypotheses (Wiersma, 2005). Each represents a fundamentally different inquiry, and researcher actions are based on the underlying assumptions of each paradigm.

While quantitative research has a long history and a set of prefabricated methods and commonly accepted rules, qualitative research has a "paucity of methodological prescriptions" because such inquiry places a premium on the strengths of the researcher rather than on standardization (Eisner, 1991, p. 169). Data are not inherently quantitative, and can be bits and pieces of almost anything. In fact, qualitative research has often been defined by what it is not rather than what it is. This is evident in Strauss and Corbin's (1990) definition that qualitative research, "means any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification." (p. 17). Creswell (1994) writes that "qualitative research is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture." (p. 47). While some find a balance in between, I immediately dove into qualitative research because, as Stake (1995) would argue, it fit best with my need to see and explore the "big picture" in life.

> A distinction between what knowledge to shoot for fundamentally separates quantitative and qualitative enquiry. Perhaps surprisingly, the distinction is not directly related to the difference between quantitative and qualitative data, but a

> difference in searching for causes versus searching for happenings. Quantitative researchers have pressed for explanation and control; qualitative researchers have pressed for understanding the complex interrelationships among all that exists. (Stake, 1995:37 cited in Kushner, 2000)

I have always been a big picture thinker. In high school, I recall that physics was one of my favourite courses, despite the fact that I struggled to pass the course. I was fascinated by the philosophy of physics, the theories presented, and their implications, but simply could not seem to focus in enough on the details and step by step calculations needed to verify these ideas. When I had to choose my path in university, I elected to pursue Child Studies, itself an interdisciplinary program for my undergraduate degree. I felt that my understanding of the children I wished to teach would be enriched through the blend of psychology, sociology, and anthropology. However, I must admit that I often struggled to find the relevance of much of the quantitative research and aligned myself with professors whose interests lay in qualitative research.

While pursuing my degree I worked as a teaching assistant for a university course in qualitative research methods. It was here that I first heard the words that my advisor, Susan Drake, would repeat often throughout the writing of this thesis: "trust the process." I recall the trepidation I experienced when, after the students had handed in the first assignment that I was to mark, the instructor told me to develop a "deconstructive rubric" using the students own interpretation of what the assignment had been to develop marking criteria. I expressed my dismay and was told to read through at least a quarter of the papers (research proposals) and then to develop grading criteria from the patterns and similarities that emerged. When I continued to hesitate, I was told to "trust the process."

The experience was informative. Although I am not confident that it was best practice, I did learn that when I looked closely enough at the seemingly unrelated research proposals, connections did emerge and, in fact, the unspoken criteria became clear.

I had a similar experience as a research assistant for a qualitative study on the political discourse of children in Canada. My task was to review the records from the legislative houses and to code any references to children. It was a truly gargantuan task -- every word spoken in the houses of provincial and federal legislature over a period of 50 years was to be skimmed, relevant sections read, copied, and coded. Although I was provided with the initial codes, I was also given the freedom to alter the coding system as it became necessary. As I began, I simply circled every reference to children without seeing any real meaning to these seemingly unconnected "bits." At the end of the project, I was stunned to look back at all the patterns that had emerged for me as I read.

Thus, I think I came very naturally to qualitative research. I have a firm belief that if we simply look at data again and again and from different angles, the pieces will merge and form a meaningful mosaic. Particularly in the case of educational research, I feel that we must use a broad lens for, as I wrote in the cover letter to my job application in 1999:

> For me, education is not restricted to the four walls of the classroom; it extends to the stage, the track field, the lunchroom, the home and beyond. I believe it is vital for a school to broaden its focus to encompass the community it serves.

In the same way, I believe that it is vital for research to encompass this larger educational community, I believe that, although it is challenging and intimidating to "trust the process" while the research unfolds, a qualitative approach is the only way to maintain

the flexibility to explore my practice from all angles, reap the benefit of open-ended questions, and ensure that no variable is ruled out (Palys, 1997).

Living Educational Theory

There were many times while writing that I questioned why I should even be doing this research. Completing the work would not bring any financial reward, and my life was hectic enough already with a full-time job and a baby on the way, or later in the research, a newborn underfoot. Yet, I did get involved and remained involved because of a need I felt to understand my work as a teacher and to try to improve it. In fact, I put off completion of this work because I was afraid that this would close the door on the academic discussion surrounding it. I was not ready to give that up until I found myself involved in university culture in other ways. I research because it enables me to reflect on my practice as a teacher, to understand that practice better, and attempt to improve it. It is my belief that improving my practice improves the quality of the education I can offer to my students. I am simply trying to get better at what I do.

The approach I took to guide my development is the living educational theory approach advocated by Jack Whitehead and Jean McNiff (Whitehead, 1989; McNiff, 2000; Whitehead, 2000; Whitehead & McNiff, 2006). This approach encourages teachers to clarify their values and to try to live them in practice. It recognizes that values and practice are often contradictory and, thus, the focus of the research is to try to resolve these contradictions. This methodology is one I embrace because of the inclusion of the 'I' of the practitioner-researcher as a legitimate focus for research. It puts forth the idea that the researcher does not need to be external to the study and that the motivation for

researching may come from within, (i.e. the researcher's desire to improve his/her practice).

Reflection has always been an important part of my practice. I have kept journals throughout my years of teaching, both for coursework and for personal expression. I was influenced early on by the work of John Dewey, presented concisely as part of a course on Curriculum Development I took prior to my teacher's college year. In the 1930s, Dewey contrasted 'routine action' with 'reflective action'. According to Dewey (1933), routine action is guided by tradition, habit, and authority and by institutional definitions and expectations (as cited by Zeichner, 1983). In contrast, reflective action involves engaging in constant self-appraisal and development.

My fear in entering teaching was that I would not find enough challenge in my work. Many a time I had heard my father, who worked in five different fields over the course of his career, question my mother, who taught in the same school for 35 years and taught kindergarten for 25 of those years. "How can you do the same thing every year?" he'd ask. "It's different each year, depending on the class," would come her vague reply. Although my mother did not formalize her reflections, I know that she was a reflective, responsive teacher who adapted her program to best suit the needs of the children in her class. Yet, I had many teachers in school who did no such thing. The program was the program and you could ask a student 2 years ahead of you about the class and he/she would be able to tell you every topic and project for the year. I worried that I would become one of those teachers, stuck in my ways, finding little challenge, and less and less enjoyment in my work as the years passed. As a result, I would become less and less effective as a teacher and students would suffer.

My teacher training heavily stressed the importance of reflecting upon your practice. In the interests of best practice and personal challenge, this became a regular part of my practice. I sought opportunities to connect with other teachers, attending workshops, piloting literacy programs for the school board, and working on Professional Development Day presentations. Entering the master's program was just another way of challenging my practice and hashing out ideas with my peers. I loved the group discussions that sparked reflection and found that they helped me to crystallize my thoughts.

The value of reflective practice as research came under debate in 1983. The view that teachers could be actively engaged in research and that that research could improve practice was challenged by Bolster (1983). He argued that teacher knowledge is based on individual experiences and it is believed to be of value if it 'works' in practical situations. However, when it 'works' there is no incentive to change and, thus, teachers will stick to routinized practices. Therefore, he argued, encouraging teachers to reflect was to encourage them to question their own routine knowledge in the light of evidence supporting alternative ideas.

That same year, Schon (1983) wrote a book, entitled *The Reflective Teacher*, that took an alternative view. He advocated reflection in educational practice. He stated that a teacher trained in reflective practice would spend time concentrating on the nature of each student. The crux of the book was that teachers could become actively involved in change if they would act as 'reflective practitioners' who thought about their actions and the consequences of those actions, rather than being dependent upon prescribed theory and technique. Following Schon's publication, researchers have increasingly recognized

the value of teachers' knowledge. A vast amount of reflective practice literature has been published, and many different philosophical and political underpinnings of the versions of reflective practice and teacher education have been promoted (Noffke & Brennan, 2005). According to Wellington (1991), reflective practice engages teachers in a cycle of thought and action that leads to professional creativity. Reflective thinkers are able to think independently, respond to problems quickly and decisively, and are the ones who value innovative ideas and thinking (Larson, 1992).

While reflection has always come easily to me, the thought of using my own reflections to write a thesis did not. Early on in the project, Adele Thomas, a member of my thesis committee, had suggested my teaching practice was "exemplary" and could inform others. The discussion made me extremely uncomfortable. She recommended that I use the extensive data source that already existed in my journals to document my practice. I fought this. To reexamine my first years of teaching was not only daunting, it would expose every facet of my practice, good and bad. While I was certainly fearful of such exposure casting me in a bad light, it was more an awkwardness over how to relate my strengths that caused me to hesitate. As Marianne Williamson (1992) insightfully expresses:

> Our deepest fear is not that we are inadequate. Our deepest fear is that we are powerful beyond measure. It is our light, not our darkness, that most frightens us. We ask ourselves, Who am I to be brilliant, gorgeous, talented, fabulous? Actually, who are you not to be? (p. 190-191).

Thus, I sought to complete a modest action research piece. This seemed simple enough. Reflect upon my practice, select an area of my practice to improve, develop a

plan, and improve it. Voila! I discovered that it was not so simple. I intended to examine my curriculum planning and develop more integrated tasks. Yet, as I developed this idea, I realized that each element of my practice is woven with another. In a conversation with my advisor, Susan Drake, I told her that integrated curriculum could never fly if we could not get the assessment piece right. While she took it to heart and worked hard to get this piece right in her next book, I reeled at the implications this would have to my practice. This was much more than developing a rubric that fit. For me, it involved challenging the assign-assess paradigm of the industrial age still prevalent in schools. Beyond this, it asked me to challenge the carrot and stick motivational philosophy that came with the Industrial Age—" the Great Jackass technique" that motivates with a carrot in front (grades as reward) and drives with a stick from behind (fear and punishment) (Covey, 2004, p. 16). This philosophy continues to be applied in most schools and workplaces today (Covey). I saw how this behaviourist theory of discipline drove my current practice as I looked at the family handbook I sent home each September, which included the following summary of our classroom rules:

I believe in positive reinforcement and will encourage students to follow our class rules by supporting appropriate behaviour with praise, happy notes home and positive phone calls home. However, if a student chooses to break a rule, the following steps will be taken:

1st consequence	*Warning*
2nd consequence	*Time spent away from the group/ Think Paper*
3rd consequence	*Loss of recess time/ Problem Solving Form*
4th consequence	*Call to parents/ Consequence Form*

5th consequence *Sent to principal (School Document, 2004)*

This realization marked the beginning of a rather dark period in my teaching career that I discuss in Chapter Four as "the crossroads." I felt defeated. My practice suffered. Work on this thesis became painful and I struggled to arrive at a question that I could become passionate about. Obstacles seemed to pop up preventing me from finishing the work: it was difficult to find times to meet with my advisors, computer files would not open for them, emails got lost in the vastness of cyberspace. The joyful news that I was expecting my first child created further roadblocks: the Ethics Committee could not meet in time to pass the in school component of my original research proposal before I left work on maternity leave. Although this was frustrating at the time, I also felt a sense of relief that I could take a break from this work and rethink what I was doing.

I walked a lot with my son the first months of his life, trying to wrestle with these thoughts. While I had envisioned a baby who would lie contently looking up at me from his stroller, my son demanded to be carried in my arms. I would strap him into the baby carrier and set out with his warm little body snuggled against my chest. We were not journeying about the way I had imagined—this was much, much better. Somewhere along the way, I realized that, in the same way, I was not making the research journey in the way I had envisioned, but that perhaps what was emerging would be much, much better. My work became more introspective. Reading a storybook to my son entitled The *Very Hungry Caterpillar* by Eric Carle (1969), I began to think about my work as a metamorphosis rather than a journey. The two are similar but, although the journey metaphor is cyclical, meaning the journey never really ends, I had this unshakable notion that my work should have an "end" whereupon I achieved utopia in the classroom. Yet,

no matter how hard I worked, the "end" (my utopian classroom) never seemed to be in sight. It was this focus on the end that baffled me, as it did Erica Holley (1997), the author of a living theory thesis:

> Once I'd accepted the idea that I was not progressing in a journey to a place where everything would be as I wanted, but that I was trying to make sense of my working life as it was, I felt less bogged down and restricted. This process of coming to know my own educational development is not as easy as it sounds. That's why I like the image of the kaleidoscope rather than the journey. It conjures up better pictures of shadows and light; ideas understood and not understood; doubt and uncertainty; clarity and thought. And in the centre, me, working, acting, reflecting and getting on with life. It is that sense of my life being fragmented with some segments better understood than others and yet all the parts together being my life, that I am delighted with. (p. 20)

Her kaleidoscope image resonated with me. I had often thought of qualitative research as a mosaic—pulling bits together in a way that made sense.

I began to think of the "end" then as not an action or a single improvement in practice, but a mosaic of understandings that form from examination of one's practice. This would be the "end" of my metamorphosis—the mosaic of ideas like the motif on the wing of a butterfly. As the butterfly spreads her wings and takes flight she is weightless, seeming to transcend earthly pressures, much as my understanding that the attempt to improve my understanding of my values and practice is my own living education theory liberates me from the pressure of an accepted "end". Holley (1997) relates a similar insight: " 'I' doesn't have to fit in. 'I' transcends the imposition of others and, for me,

creates an urgency to 'rename' teaching by writing about my experiences from my own point of view." (p. 23). Thus, I came to realize that the living education theory was a good framework for my research. McNiff (2000) believes that such work:

> ...encourages individuals to clarify the values base of their work, and to try to live their values in their practice...and aim to resolve the contradictions, so that the researcher may work more productively and enable others to do the same (p. 201).

The realization that I could use this work to transcend the boundaries of the old paradigms became the inspiration.

Narrative-Autobiographical Self-Study

I chose to discover and refine my living theory and tell my story through a narrative-autobiographical self-study. I came naturally to narrative as one of my hobbies is storytelling (I lead candlelit ghost tours through an historic fort). Narrative has a specific focus on the stories told by individuals (Polkinghorne, 1995). It is the experiences as expressed in lived and told stories of individuals (Pinnegar & Daynes, 2006). I will define it here as a qualitative research design in which "narrative is understood as a spoken or written text giving an account of an event/action or series of events/actions, chronologically connected" (Czarniawska, 2004, p. 17). It is autobiographical because I have written and recorded it, as a subject of the study.

Self-study is a "personal process of thinking, refining, reframing, and developing actions" (Loughram & Northfield, 1998, p. 15) and making these reflections public. Self-study as described by Bullough and Pinnegar (2001) is "the balance between the way in which the private experiences can provide insight and solution for public issues and

troubles and the way in which public theory can provide insight and solution for private trial" (p. 15). I have chosen self-study as a vehicle for my research because I was inspired by Squire's (1998) assertion that: "teachers who engage in self-study practices...act as role models of life long learning for their peers and their students, contribute to teacher generated educational research, reflect on their practice and learn from experience" (p. 19).

A review of the self-study literature indicates that this research can be organized into three categories (Louie, Drevdahl, Purdy, & Stackman, 2003). My self-study touches on two of these categories. The first category focuses predominantly on developing teacher identity. Some of this research reflects the thoughts and experiences of beginning teachers. For example, as a new university educator, McCall (1996) considered her conflict with the goals of the administration, particularly that the purpose of teaching was to satisfy "customers"/students. Similarly, Guilfoyle (1995) and Hamilton (1995) shared their difficulties in learning their roles as new members of the staff. Through examination of my stories I attempt to identify the values and critical events that have helped me to shape my professional self. The second category of self-study research relates teachers' desire to improve their teaching practices through examining the relationship between teaching beliefs and practice. In this vein, Oda (1998) investigated how her cultural background impacted upon her teaching and whether it helped or hindered students' understanding of multicultural issues. I retell, and, thus, in some way relive, my own "living contradictions", those times when my values and practice contradicted each other (Whitehead, 2006).

Clandinin and Connelly (2000) sought to develop a research cycle that would provide a loose structure for such work. Using this cycle, I move back and forth between the stages: inward (self), outward (colleagues/ educational community), backwards and forwards (across time) as I will continually focus my reflections simultaneously in these four directions. This allows me to tell the story of my research as an autobiographical narrative or self-study. While this type of research is not common in educational research, Connelly and Clandinin (1990) report some similar accounts of teachers writing as professionals. I have chosen to share stories that help to capture my successes and failures, to identify "critical incidents" in which "the course of life is seen to have connecting lines that were previously hidden, a new direction becomes clear where only wandering existed before...[T]he writer's retrospective view discerns a pattern in experience...Past life is therefore being rearranged...retrospectively interpreted, in terms of the meaning that life is now seen to hold" (Graham, 1999, as cited in Bullough & Pinnegar, 2001).

I believe strongly that we all lead "storied lives" (Connelly & Clandinin, 1990, p. 2) and that we naturally learn and teach best through story (Feige, 1999). I am inspired by the growing body of evidence that indicates that educators' stories contain trends, themes, and insights (Bray, Lee, Smith, & Yorks, 2000) that "can create gigantic, monumental changes and transform the system" (Norum, 2000, p. 9). Narrative provides a form through which matters that would remain untold about our daily lives are shared. Stories engage readers and prod us to think in new ways. The use of narrative in research is demonstrating the usefulness of findings within a context instead of as sterile, detached findings. Stories are powerful tools that may be used to convey deep feelings and

meanings. Stories provide rich texts for interpretive phenomenological research studies (Benner, 1991).

Throughout my own educational career I have come to realize that the degree to which an author tells the story and speaks to my personality and experience is a key factor in determining how much I comprehend material and whether I act on it. In the same way, I believe that I can best reflect on my own experience and add to the body of professional literature through the sharing of a diverse set of stories. I find that I am like William Faulkner who once commented "he never knew what he thought about something until he read what he'd written on it" (as cited in Bullough & Pinnegar, 2001, p. 17). I have come to realize that it is the actual writing, reflecting, dialoguing, revising, and revising again, that forms my understanding.

I have sought to develop rigour in my work and believe that it follows the guidelines presented by Bullough and Pinnegar (2001) for such research. There can be no doubt that my work is about the problems and issues that make someone an educator. Further, I have attempted to meet Bullough and Pinnegar's demand that "the autobiographical self-study researcher [fulfill] an ineluctable obligation to seek to improve the learning situation not only for the self but for the other." (p. 17). I believe that this journey has led me to improve my own educational practice and I hope to share those improvements with others in the educational community. Students whom I teach may benefit from the actions I take to improve my practice, as will my teaching partners. I hope that the reader may be inspired to examine his or her personal practice and, in this way, students and teachers in many classrooms may benefit. It is my belief and my hope that the reader, particularly the beginning teacher, will be able to identify with my

struggles and that the process of my own meaning making will illuminate "critical incidents" in the lives of other educators and provide a meaningful contextual lens through which to view them. In this way, I hope that my work "rings true and enable[s] connection" (Bullough & Pinnegar, p. 16). Stories are shared with the insight of my own interpretation to assist the reader in understanding the larger picture and the connections between these critical incidents. Thus, I also feel that my work will "promote insight and interpretation" (Bullough & Pinnegar, p. 16).

I have attempted to ensure that my work "engage history forthrightly and [that I] take an honest stand" (Bullough & Pinnegar, p. 16) by examining my own biases and presenting my failures along with my successes so that the reader has a sense of conscience in my work. Use of Eric Carle's (1969) *Very Hungry Caterpillar* and the concept of metamorphosis helps to define my "quest", yet, I do not tell this story from the "romantic hero" framework. Rather, I am an "ironic hero." I attempt to present and learn from both my failures and successes for I recognize, as Zorba the Greek once noted, that I am indeed the "whole catastrophe." The framework of the ironic hero "is a valuable mode for teacher educators, because it is a narrative form which allows a focus on the failed, the difficult, and the problematic and which does not require the tragic end or the heroic romantic return" (Campbell, 1968 as cited in Bullough & Pinnegar, 2001, p. 18). As Bullough and Pinnegar would insist, "something genuine is at stake in the story." (p. 17). Quite simply I am exposing my teaching practice to my own critical eyes and then offering it up, with all its flaws and imperfections to the world. I cannot think of how I could have more at stake.

Data Collection

Since "I' is at the center of the inquiry, data for this study exist primarily in the form of personal narratives/stories. Data sources for these stories include a) my own journal notes kept as part of my normal reflective teaching practice from the time I consciously expressed and recorded a philosophy of education as part of my preservice education in 1999 to the present day; and b) primary documents such as daily lesson plans, unit plans, and long-range plans developed over the 5 years of my teaching career.

Journals form the richest data source for this work. Teachers' reflective journals are a meaningful way for teachers to "use the strength of their stories...to acquire insights about values, teaching, children and curriculum discipline" (Isenberg, 1995, p. 76). Bolin (1988) suggested that reflective journals can be a key to helping student teachers develop their own ideas about the teaching profession and their roles in it. Armaline and Hoover (1989) found that student teachers in their study were better able to examine their own belief systems through journal writing. Both of these studies included analysis of the journals and interviews between student and supervisor. It is now common to ask preservice education students to keep a reflective journal (Hoban, 2000). It is less common for practicing teachers to keep reflective journals, although some research has been conducted in this area. Cooper (1991) writes that

> [a] notebook, a diary or a journal is a form of narrative as well as a form of research, a way to tell our own story, a way to learn who we have been, who we are, and who we are becoming...journal writing allows us to rethink our past, our present and our future selves. (p. 98)

Primary artifacts, such as course work, unit plans, and lesson plans round out the data and enrich the study. By reflecting on this material once again, I am following Wolcott's (1994) recommendation that one should "try and capture both perspectives, the close-in one while you are still engaged in [the] work, the distanced one of later reflection" (p. 15). I believe this data will aid in the development of meaningful, quality questions, as well as in identifying my own starting position and the critical incidents in my career which have helped me grow as an educator.

Analysis of the Data Collection

It is not an easy task to make meaning of this spiralling data archive, collected over 5 years of teaching. Cole and Knowles (2001) insist there *is* no quick or easy way to analyze qualitative data. The process is tedious, requiring time and patience. The authors quote Plummer (1983) in order to stress this point:

> In many ways this is the truly creative part of the work. It entails brooding and reflecting upon mounds of data for long periods of time until it 'makes sense' and 'feels right,' and key ideas and themes flow from it. It is also the hardest process to describe: the standard technique is to read and make notes, leave and ponder, reread without notes, make new notes, match notes up, ponder, reread, and so on. (cited in Cole & Knowles, p. 99)

By revisiting, reflecting, and retelling the stories of my teaching career from the time I consciously expressed and recorded a philosophy of education I have, in a sense, rewritten my history. Through this reflection and the retelling of my "critical incidents" I continually journey "inward" to my past personal stories while looking "outward" to the societal and educational reforms and standards driving the educational agenda (Clandinin

& Connelly, 2000, p.50), making this research design unavoidably cyclical as it is focused simultaneously in four directions: inward (self), outward (educational community), backwards, and forwards (across time). This writing process has allowed me to integrate my experiences and to draw connections. Moreover, it has provided me with the revelation that, for the students in my classroom, it is often not how or what I teach, or whether I have taken the time to reflect and integrate the curriculum concepts before a lesson that matters. It is the degree to which I assist students to work through their own reflective process that determines whether or not they are able to see the "whole", rather than the "hole" Cameron (1998) so aptly describes:

> Writing is a valuable tool for integration. The root of the word "integration' is the smaller word "integer," which means "whole." Too often, racing through life, we become the "hole," not the "whole." We become an unexamined mass into which our encounters and experiences rush unassimilated, leaving us both full and unsatisfied because nothing has been digested and taken in. In order to "integrate" our experiences, we must take them into account against the broader canvas of our life. We must slow down and recognize when currents of change, like movements in a symphony, are moving through us. (p.107-108)

Ethical Considerations

The only ethical issues surround privacy and confidentiality of the journals and the persons referred to. Vague descriptors only are used in journals to ensure confidentiality. These journals are kept in a locked drawer when not in use. Names will not be used at any time in the final paper so that students, teachers, and parents described remain confidential.

Dissemination

The completed study will be presented on a website. Results may also be shared through a series of workshops and with the Niagara local Elementary Teachers' Federation of Ontario to assist in their planning for new teacher induction or professional development on reflective teaching and/ or integrated curriculum. The focus of these results will be on my own reflection and use of planning and assessment tools.

CHAPTER FOUR: MY NEW STORY

Standing at the Crossroads

One day Alice came to a fork in the road and saw a Cheshire cat in a tree. "Which road do I take?" she asked.

His response was a question: "Where do you want to go?"

"I don't know," Alice answered.

"Then," said the cat, "it doesn't matter."

~Lewis Carroll's Alice in Wonderland

In this chapter, I seek to chronicle my journey as I address the dichotomy between theory and practice expressed in my earlier work with Drake et al. (2002). In so doing, I also overcome some of the obstacles that had prevented me from teaching for understanding *and* ensuring that students are prepared for standardized tests. I also begin to find a balance point between assessment for accountability and assessment for understanding. Chapter Five speaks to these dichotomies in greater detail.

As I began this work, I found myself at a crossroads in my career—no longer able to call myself a beginning teacher, yet feeling far from the confident, experienced teacher that I felt I should be. Undeniably, I began writing this at a time when I felt paralysed, defeated, and insecure. In September of 2003 I was partnered with a teacher whose philosophy differed dramatically from my own. She was constantly opening the curriculum documents provided by the Ministry and checking the expectations listed to ensure that we had covered each and every one, while I pulled what I considered to be the most important of the expectations and used these "enduring understandings" to write the broad long-range plans that guide me throughout the year. Admittedly, due to a lack of

time, I did so in a less systematic way than advocates of curriculum mapping, such as Susan Drake and Rebecca Burns (2004) would suggest. Nonetheless, my view is supported directly in the Ontario curriculum (Ontario Ministry of Education, 1998) documents. Recognizing the time restraints teachers are under, the revised Social Studies (Ontario Ministry of Education, 2004) document identifies these big ideas for the teacher and includes a curriculum map and conceptual framework, which remains consistent throughout the curriculum. Similarly, the Language document, revised 2006, states:

> All curriculum expectations must be accounted for in instruction, but evaluation focuses on students' achievement of the overall expectations. A student's achievement of the overall expectations is evaluated on the basis of his or her achievement of related specific expectations. The overall expectations are broad in nature, and the specific expectations define the particular content or scope of the knowledge and skills referred to in the overall expectations. Teachers will use their professional judgement to determine which specific expectations should be used to evaluate achievement of the overall expectations, and which ones will be covered in instruction and assessment (e.g., through direct observation) but not necessarily evaluated. (p. 16)

Yet, I often felt less "accountable" than my colleague who recorded column after column of number grades and used a wide selection of standardized assessment tools (e.g., reading and spelling level assessments) to help her see where the kids were "at". I tended to grade based on my own internalization of the curriculum expectations and exemplars while rarely referring back to the actual documents. I did not feel that I had to be

obsessively reviewing these each day because my units, rubrics, assignments, etc., were all developed with these curriculum expectations in mind.

The climate of the school was such that we were strongly encouraged to work together and this meant that at our weekly grade meetings my views and practices were continuously being critically questioned. My partner tended towards the traditional, while I tended towards the progressive. She saw things in black and white—and most of the time she saw that she was "right", thus, I must be "wrong." I had the support of my principal but, nonetheless, I could not discredit her opinions. I have always been good at playing devil's advocate, at taking either side in a debate. I know that there is more than one way to look at a situation. Thus, I took many of her comments to heart. I could not seem to balance her views and mine in a way that made sense and found myself becoming more and more indecisive and much less confident in my decisions as a teacher.

Ironically, it was at this time that I was asked by my principal and superintendent to act as a mentor for new teachers within my region. I felt awkward about this as I still had so many questions about my own practice and continued to struggle with aligning my practice with my philosophy. I had also enjoyed the independence of teaching, where my practices were rarely exposed to critical eyes and feared that, by sharing my practices, I would expose not only my successes but also my weaknesses. I had always felt that assessment was my weakest area in teaching. Although no one had ever complained about my assessment practices, I knew that other teachers had pages of marks aligned into neat columns with percentages and values assigned to each mark and that this was the accepted practice. I had a variety of formative assessments and evaluations: jotted

observations, assignments, conference notes, projects, rubrics, collections of student work, test marks and grades untidily recorded on class lists. Yet, unlike my colleague, I did not have a clear plan (i.e., percentage breakdown) to mesh all of this data when report card time came, rather, I looked over all the data and reported what seemed to be the most common grade. I dreaded evaluation from the principal and hoped that he or she would not ask to see my mark book.

When I returned to school in September of 2004 it was with the knowledge that I would be leaving the class in another teacher's hands as I went on maternity leave in January. I worried a great deal about what this unknown, unhired teacher would think of me, and, more to the point, what he or she would say about me to my peers. This worry became so strong that, when I had the opportunity to sit in on the hiring process for the teacher who would replace me, I could not stop thinking: "Who would be least likely to criticize me?" It was at this point that I felt the journey stopped. I did not feel I was moving on. The imposition of the practices of my peers, and the subtext of assigning and assessing that ran through our conversations meant that I did not always act as I wanted. The politics of oppression, that "disable us from participating as fully as we might in our own educational values and practices" (Lomax & Whitehead, 1996) were at work. I oppressed myself because I was afraid that my practice would be judged at a time I was not able to defend it since I was not working within the school. I altered my practices drastically. In an effort to seem "on top of things" while fighting nausea and an unbelievable fatigue, I looked around at what other teachers were doing and thought back to my own teachers and how they graded work. Interestingly, at this time, it was not worry over comment from parents or the administration that caused me to abandon many

of my firmly held notions. It was a fear that my practice would come under the microscope in staff room conversations.

I began printing spreadsheets for each subject that would be filled with numbers representing more of the students' work than I had ever marked before. I recorded marks for worksheets we took up in class, had student helpers mark work at recess, asked students to mark each other's work and call out the marks for recording, and even created a column or two of marks for things, such as participation, group work, and contributions for class discussion, without any real criteria-- simply to fill in the boxes so that I could hand over pages of marks to the incoming teacher.

From this experience, I learned a great deal. Looking across the grades for each student, they stayed remarkably constant. Marking this way was quick and easy so students received more immediate feedback, but not meaningful feedback. Seeing their papers topped with good grades motivated the high achievers, the struggling student was most often resigned when the paper was returned. Paradoxically, while I realized that my well tabbed, well organized notebook made no significant difference in the way that my students performed, I felt more comfortable with my public image as a teacher. If my administrators were to walk in, or a parent questioned a grade, I had something concrete to show that I was doing my job as an assessor.

In the Dark

"He built a small house, called a cocoon around himself."

~Eric Carle's Very Hungry Caterpillar

"Perplexity is the beginning of knowledge."

~ Kahlil Gibran

It was around this time that I became extremely discouraged with more progressive methods of teaching and assessment. I found myself remembering back to an essay I wrote in my first year of undergraduate studies that traced the development of the school. In it I wrote that schools were really a product of the Industrial Age—a place where children could be educated to be better workers. Thus, children were managed much like products. They were put through the assembly line of education. In each grade, yet another skill or piece of knowledge was added to make a new and improved future worker. For quality control, they were held up the yardstick of standardized testing. While values were undoubtedly a part of the curriculum, their purpose was again to produce a better worker, rather than a self-actualized individual. The National Education Association listed seven aims in its 1918 report, *Cardinal Principles of Secondary Education*: (1) health; (2) command of the fundamental processes; (3) worthy home membership; (4) vocation; (5) citizenship; (6) worthy use of leisure; and (7) ethical character (Kliebard, 1995, p. 98).

I found myself commenting on the undying loyalty we, as adults, have to this school experience. That is, we assume that this assembly line of education, as many of us knew it, is the prime prerequisite to success in life. Schools themselves reaffirm this loyalty to school through the selection of literature presented in the upper grades. Take

for example, Lord of the Flies, commonly studied in high school. In this story a pack of schoolboys degenerate into killers because no teachers are around to preserve the "system" I began asking myself whether this was really a system I wanted to further and, for the first time, questioned not only my identity as a teacher but whether, in fact, I wanted to BE a teacher.

Finding My Way on the Wing of A Butterfly: My New Story

"He nibbled a hole in the cocoon, pushed his way out and...he was a beautiful butterfly!"

-Eric Carle's Very Hungry Caterpillar

"Fate will find a way"

~Virgil

It is funny how our perspectives can change with a simple twist of fate. My work had been put aside, collecting dust for months, when my sister-in-law included Stephen Covey's (2004) book, The 8th Habit, on her Christmas wish list. I purchased it for her and had a "sneak-preview" His opening chapters spoke to the mindset of the industrial age and argued that we are in a new age—the age of information. He contends that our very civilization is changing and the new "Knowledge Age" worker is based on a new paradigm, one entirely different than the *thing* paradigm of the industrial age... the Whole-Person Paradigm" (p. 20). This paradigm is expressed through the use of a simple graphic, made up of two concentric circles with mind, heart and body in the outer circle and spirit in the inner circle.

Covey (2004) argues that the Industrial Age led us to treat people as things, giving us the belief that control and management of our human "product" was of utmost

importance. This treatment led to negative feelings and alienation, depersonalizing precious relationships. His new paradigm includes the four basic needs or motivations of all people: the physical, the mental, the social/emotional, and the spiritual. I am not sure why this simple graphic spoke so much to me. Perhaps, it was the thought that if the world of business was moving in this new direction, then the holistic, constructivist notions I had had since my teacher training need not be buried in the current climate of assessment. I realized that I need not sit back and teach the status quo and that finding the balance I was looking for required me to look through the lens of the whole-person paradigm—a simple visual espousing my long-ago expressed philosophy. It was, for me, the right words at the right time, although it was not a foreign idea in education. Tomlinson and McTighe (2006) express a similar sentiment that education must look beyond content to the students themselves:

> central to the art of teaching is the student—*whom* we teach. The student is the focal point of our work as teachers. We believe the lives of students should be shaped in dramatically better ways because of the power and wisdom revealed through high-quality curriculum. In a less complex—less human—world, teaching might simply be telling young people what's important to know. In such a setting, students would say, "I see. Thanks." And the world would go forward. But human beings *are* varied and complex. The varieties and complexities demand every bit as much study from the teacher as does curriculum content. Failure to attend to that requirement is likely to result in failure of the teaching enterprise for many, if not all, students. (p.12)

Howard Gardner's (2006) multiple intelligences theory, an important influence in my earliest thoughts on education, has a similar multi-dimensional approach, suggesting that we describe an individual's cognitive ability in terms of independent but interacting "intelligences" rather than in terms of a single "general" intelligence. Each learner's intelligence profile consists of a combination of relative strengths and weaknesses among the different intelligences: linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, naturalistic, interpersonal, intrapersonal, and existential (Gardner). As Vygotsky (1978) emphasized, experience — the way each individual internalizes the environment's information — is important in both cognitive and personality development. If we give all students the same material, each student will have a different experience according to his or her background, strengths, and challenges. Thus, to support learning for all students, teachers need to offer students rich experiences — activities in which they can engage with the material personally rather than just absorb it in an abstract, decontextualized way. These "rich experiences enable students to learn along several dimensions at once — socially, spatially, kinesthetically, self-reflectively, and so on. Often, these experiences cross subject-area lines" (Moran, Kornhaber, & Gardner, 2006, p. 25). Curriculum integration, then, is a key component in moving me beyond the view that students are the one-dimensional products of an educational system.

Aligning Theory and Practice

The habits we form from childhood make no small difference, but rather they make all the difference.

~Aristotle

Don't worry that children never listen to you; worry that they are always watching you.

~Robert Fulghum

I realized that I could use my work to transcend the boundaries of the old paradigms through developing my own living educational theory, governed by my personal values, that adequately weaves the whole person paradigm into an interdisciplinary planning and assessment framework. At the beginning of this work, I was still wondering how best to "cover" the standards and still move my students beyond them. I was not alone in asking this question. Tomlinson and McTighe (2006) write that:

> Educators need a model that acknowledges the centrality of standards but that also demonstrates how meaning and understanding can both emanate from and frame content standards so that young people develop powers of mind as well as accumulate an information base (p. 1).

I began with Drake and Burns' (2004) new conceptualization of the KNOW, DO, BE framework but felt that, for me, it lacked connections between each piece and did not adequately express how central the BE (the heart and spirit) was to the whole student. In his discussion on integrating what you learn into your life, Covey (2004) includes a Venn diagram graphic that mirrors Drake's and Burns' concept. He contends that "to know and not to do is not to know" and that habits lie at the intersection of knowledge, attitude and skill (p. 33).

This gave me the idea to overlap the concepts in Drake's and Burns' (2004) KNOW, DO, BE model and to include the Habits of Mind that I feel are the essence of education. I wanted to emphasize the importance of the BE and show how it was central to the whole framework. I added reminders to teach and practice the BE as I wanted to make these habits explicit in my teaching. I realized that many times in the past I had simply thought that students would somehow absorb these values. While the KNOW and DO would change based on the units of study, I saw the BE as a constant, the heart of my teaching. As a recent report for the Association for Supervision and Curriculum Development (2007) stated:

> When we commit to educating whole children within the context of whole communities and whole schools, we commit to designing learning environments that weave together the threads that connect not only math, science, the arts, and humanities, but also mind, heart, body, and spirit—connections that tend to be fragmented in our current approach. (p. 2).

In many ways the BE is similar to the DO. In fact, this distinction was still foggy for me when this work was entering its final draft. A sudden revelation helped me to see that the DO are skills that primarily allow students to succeed in school, while the BE is about succeeding in life. More important than passing along any of the subject specific knowledge or skills the BE answers the burning question: Who do I want my students to BE? The answer: reflective, independent (self-determined), and interdependent.

In order to achieve this I needed to focus on Habits of Mind. Habits of Mind are usually defined as "characteristics of what intelligent people do when they are confronted

with problems, the resolutions to which are not immediately apparent" (Costa & Kallick, 2000, p. 21). There are a variety of frameworks available in the educational literature. For example, Costa and Kallick (2000) draw upon the work of Glatthorn and Baron (1985), Perkins (1985), and Ennis (1985) to determine the characteristics of effective thinkers. They present these as 16 Habits of Mind:

- Persisting
- Thinking and communicating with clarity and precision
- Managing impulsivity
- Gathering data through all senses
- Listening with understanding and empathy
- Creating, imagining, innovating
- Thinking flexibly
- Responding with wonderment and awe
- Thinking about thinking (metacognition)
- Taking responsible risks
- Striving for accuracy
- Finding humor
- Questioning and posing problems
- Thinking interdependently
- Applying past knowledge to new situations
- Remaining open to continuous learning (p. 2).

Marzano (1992) defines Habits of Mind as mental habits individuals can develop to render their thinking and learning more self-regulated. These mental habits include:

- Being aware of your own thinking
- Planning
- Being aware of necessary resources
- Being sensitive to feedback
- Evaluating the effectiveness of your actions

I admire their work and the detail they go into in defining each of the habits and I want to find a way to infuse these ideas into my DO and BE because I believe that, when effective habits of mind are an explicit part of curriculum, we illuminate the thinking process and strengthen the learning process.

Due to the fact that I myself was positively influenced by the book, *The 7 Habits of Highly Effective People* (Covey, 1989), I decided to define the BE around Stephen Covey's habits that he bases on the Character Ethic, which "taught that there are basic principles of effective living, and that people can only experience true success and enduring happiness as they learn and integrate these principles into their basic character" (p. 18). There is a wide body of educational literature often referred to as character education that echoes this idea. A growing body of research is suggesting that character education produces not only the expected positive social outcomes, but that it also results in academic gains for students (Aber, Brown, & Henrich,1999; Allen, Philliber, Herrling, & Kupermine,1997; Character Education Partnership, 2000; Elliott 1993; Flay, Allred, & Ordway, 2001; Kiger, 2000; Twemlow et al., 2001). For example, in a study of 120 elementary schools in California, Benninga, Berkowitz, Kuehn, and Smith (2003) found that schools with the strongest character education scores tended to have higher academic scores by a small but significant margin. Thus, character education is a powerful way to

help students develop the habits that lead to improved academic performance and provide a nurturing environment. Further, students develop lifelong skills that will lead to both personal and professional success.

Covey (1989) divides his seven habits into two areas: (1) those that foster independence and self-determination (be proactive, begin with the end in mind and put first things first), and (2) those that foster interdependence (think win/win, seek first to understand then to be understood, synergize, and sharpen the saw). I believe that these habits must be explicitly taught and assessed—not as part of a unit, but as an ongoing process monitored by the students themselves. As Costa and Kallick (1992) remind us, the ultimate purpose of evaluation is to have students become self-evaluating. Therefore, reflection also plays an essential role in the BE. I have summarized my reconceptualization of the KNOW, DO, BE in Figure 3.

Finding Balance and Overcoming Obstacles

"One must learn by doing the thing, for though you think you know it, you have no certainty until you try."

~Aristotle

"The greater part of our happiness or misery depends on our dispositions, and not on our circumstances."

~Martha Washington

Not only had I now developed a framework that would guide my planning and assessment, I realized I had developed a visual that could be used to represent my living theory as well. I had struggled to align theory (my KNOW) and practice (my DO) and this disconnect meant that I was unable to live out my values—in essence, I was unable

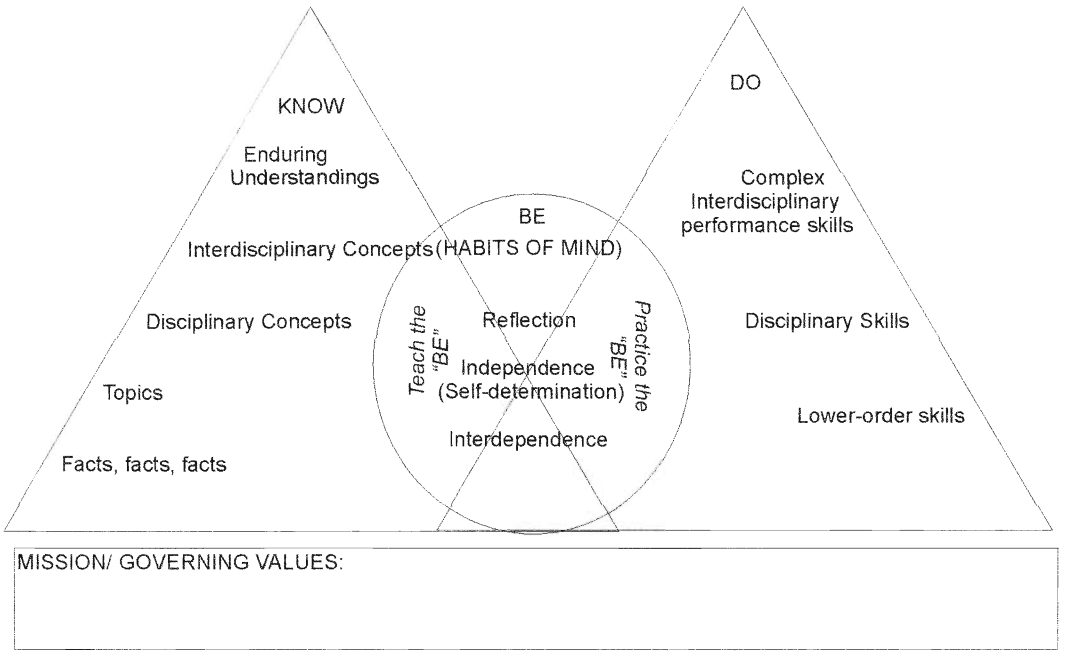

Figure 3. Reconceptualization of the KNOW, DO, BE model.
Note. From *Meeting standards through integrated curriculum*, by S.M. Drake and R. Burns, 2004, Alexandria, VA: Association for Supervision and Curriculum Development. Copyright 2004 by Susan Drake and Rebecca Burns. Adapted with permission.

to BE (at least the teacher I wished to be). Although I had the knowledge, a lack of time, skills, tools, and resources meant that my practice was far from ideal. I used the KNOW, DO, BE framework to clarify my thoughts.

I began with my mission statement. What governing values would guide my practice? I stared at the computer screen for a long, long time. Many words came to mind. Authenticity, for I aim to be aware of my shortcomings and strive to overcome them but never hide them. Compassion and kindness, for I strive to treat my students with both and hope that I set an example that they will follow. Contribution, for I hope to help students recognize how much they have been given and to encourage them to pay it forward. Teamwork, for when we work together we can achieve so much more. Commitment, for I feel it is important to build bridges of trust with students and to teach them the importance of following through. Integrity, for I feel it is important to treat everyone in a fair and equitable manner. Finally, perseverance, for, as I tell my struggling students, Thomas Edison failed over 6,000 times before he succeeded with his light bulb. In the words all school children know: we must try, and try again. Indeed, this very work is an example of perseverance. It has been written, shelved, and rewritten over a period of more than 2 years. It is a work I have been unwilling to give up, despite the many changes in my life, including the birth of my two beautiful children. What compelled me? What was this work really about?

I reread the completed sections of this work and asked myself what I was really hoping to achieve. Finally, I realized that, for me, the need for balance—expressed over and over—really meant happiness (my own and my students'). In the end I articulated my

mission in one simple aim suggested by the whole-person paradigm and by Nel Noddings (2005): happiness.

> Great thinkers have associated happiness with such qualities as a rich intellectual life, rewarding human relationships, love of home and place, sound character, good parenting, spirituality, and a job that one loves. We incorporate this aim into education not only by helping our students understand the components of happiness but also by making classrooms genuinely happy places.
>
> Few of these aims can be pursued directly, the way we attack behavioral objectives…They are meant to broaden our thinking—to remind us to ask *why* we have chosen certain curriculums, pedagogical methods, classroom arrangements, and learning objectives. They remind us, too, that students are whole persons—not mere collections of attributes, some to be addressed in one place and others to be addressed elsewhere. (p. 9)

To educate for happiness may seem like an oxymoron in this era of increasing accountability, yet, Nel Noddings (2005) proposes that happiness is an essential aim of education, if we are to teach the whole child. Further, I recognized that, although the happiness of my students was important to me, my own happiness must come first. I had to find balance in my teaching and a way to overcome the disconnect between my KNOW and DO so that I could live out my beliefs and be happy with my image of myself as a teacher. I also had to balance my professional and personal lives. As John Novak (personal communication, 2001) once said in a lecture I will never fail to recall: Teachers have a moral obligation to lead interesting lives. If planning and assessment eat

up my time, I cannot lead an inspiring life. I cannot be happy. If I am not happy, I cannot bring joy into my classroom. Thus, overcoming the obstacle of time became a primary focus of this work.

Next, came the step of identifying what my beliefs were and who it was that I really wanted to be. I identified my KNOW and DO—the theory that was, for me, most worth knowing and the implications for my practice. I scanned my work to look for recurring themes. I was shocked at the themes I came across as I read through the initial chapters written long ago (e.g., constructivism, cognitive constructivism, differentiated instruction, integrated curriculum, multiple intelligences, experiential education, and authentic assessment). At that time I had expressed these as enduring understandings that answered the question "So what?" (Wiggins & McTighe, 1998).

I reviewed these while asking myself the most important question: Who did I want to BE? It was clear that I wanted to be the kind of teacher that facilitated my students' journey towards becoming lifelong learners. Ultimately, I felt that I would achieve this by living the BE. This meant that I must lead a principled life based on the habits I professed. I must also be a model for reflective learning. Figure 4 shows the KNOW, DO, BE of my personal practice. The questions still remained: would my daily lessons and assessment look any different than before? How would I actually put this into practice? I had been through the experiences before of writing my philosophy of education, my epistemology of assessment, and a collaborative integrated curriculum. I

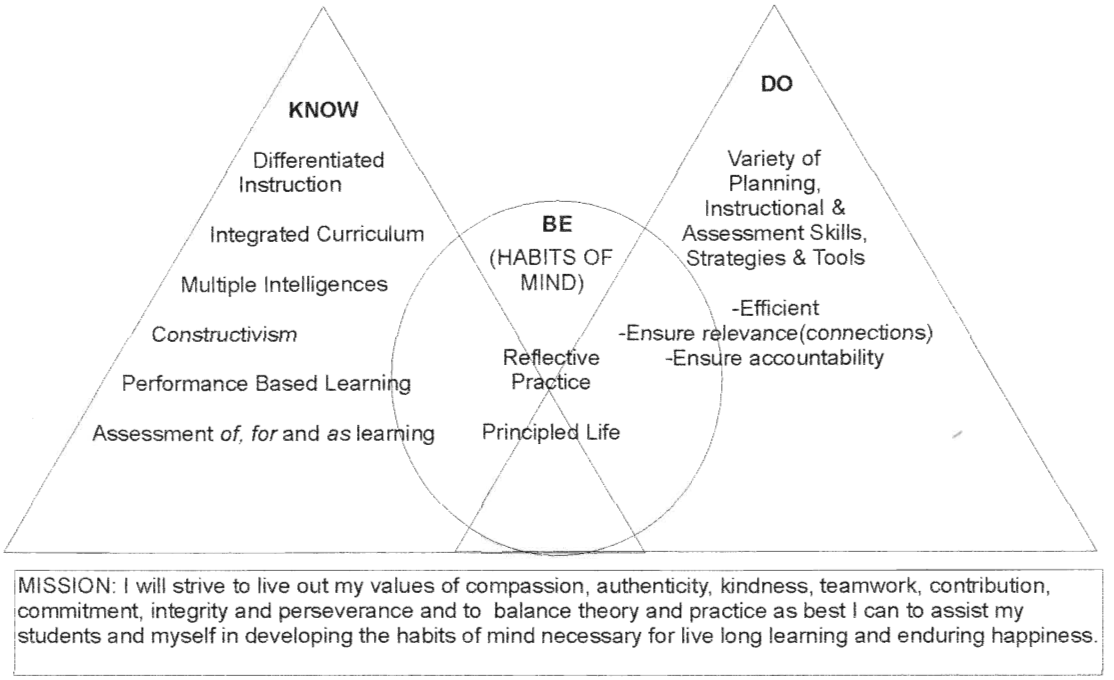

Figure 4. My KNOW, DO, BE
Note. From *Meeting standards through integrated curriculum*, by S.M. Drake and R. Burns, 2004, Alexandria, VA: Association for Supervision and Curriculum Development. Copyright 2004 by Susan Drake and Rebecca Burns. Adapted with permission.

had become discouraged as I struggled to actually implement these in my classroom daily. How did this differ? I knew I needed to go further to identify the obstacles that had been in my way and how I would overcome them.

Chapter Five tells the story of how I used the backwards design process of Wiggins and McTighe (1998) and combined the KNOW, DO, BE model (Drake & Burns, 2004) with Curry and Samara's (1995) differentiation planner to form what would serve as term planning templates to align my practice. The KNOW, DO, BE model provided an overall structure for the term, while the differentiation planner helped me to plan a challenging variety of relevant daily lessons along with product and performance assessments.

CHAPTER FIVE: SPREADING MY WINGS

"Education has for its object the formation of character. The great aim of education is not knowledge but action."

~Herbert Spencer

"Tell me and I will forget. Show me and I may remember. Involve me and I will understand."

~Chinese Proverb

In this chapter I seek to align my instruction and assessment to ensure that I am teaching for understanding *and* ensuring that students are prepared for standardized tests while assessing for understanding *and* remaining accountable.

My greatest obstacle had been myself. I had been unable to find a realistic balance between traditional and progressive practices. Although I favoured progressive views, things never seemed to work out the way I hoped because students seemed ill equipped to complete the tasks and there never seemed to be enough time to plan, to teach, to perform, and to assess.

I wanted to use the KNOW, DO, BE model because I believed that it was a powerful vehicle for transcending the curriculum and ensuring accountability. It is about studying material in depth and making connections to make learning relevant for students. Using the KNOW, DO, BE model encourages thinking like an assessor when planning curriculum as it has the principles of Understanding by Design (Wiggins & McTighe, 1998) at its heart. This was important as the "big picture" thinking of the design down process fits with the way I view things. It starts with the biggest issues, identifying the

desired results, and then "works backwards" to develop instruction. The framework identifies three main stages:

- Stage 1: Identify desired outcomes and results.
- Stage 2: Determine what constitutes acceptable evidence of competency in the outcomes and results (assessment).
- Stage 3: Plan instructional strategies and learning experiences that bring students to these competency levels.

This approach is being adopted in schools worldwide (Tomlinson & McTighe, 2006). The school board I work for is currently advocating using this design down approach. The KNOW, DO, BE framework (Drake & Burns, 2004) allowed me to adopt this approach while developing interdisciplinary curriculum that helped students to connect their learning between subject areas and make real-world applications.

Yet, in attempting to integrate an entire year of curricula, perhaps I had "bitten off more than I could chew." While filing material one day I came across an emotional intelligence self-test, completed for a conference on leadership and promptly discarded. The BarOn (1997) EQi assesses skills associated with being emotionally and socially intelligent. It is a widely used measure of emotional-social intelligence with composites in the areas of intra- and interpersonal skills, stress management, adaptability, and general mood. The results were enlightening. In most areas I am strong, however, my reality testing (a sub-skill of adaptability) is low. I set unrealistic expectations for myself. I came to realize that fully integrated curriculum cannot exist within the public education system, and maybe it should not. The York University web page has a powerful advertisement for interdisciplinary studies:

A picture of a cigarette accompanies the text—

....A chemist sees formaldehyde

...A child psychologist sees peer pressure

...A law student sees class action

A picture of Earth from space accompanies the text—

...An historian sees war.

...A geologist sees fossil fuels.

...An engineer sees space stations.

A picture of earphones accompanies the text—

...An anthropoligist sees the lastest trend.

...A behavioural scientist sees the privacy.

...A marketer sees piracy.

QUESTION EVERY ANGLE.

STUDY EVERY ANGLE.

RESEARCH EVERY ANGLE.

WELCOME TO THE INTERDISCIPLINARY UNIVERSITY.

(http://www.yorku.ca/web/index.htm)

Yet, it is precisely because these different disciplines exist that we are able to view the scenario through a number of lenses. It is, for example, impossible to envision a single person with expertise in chemistry, psychology, and law. It is because individuals have specialized in these fields that they are able to share their unique perspective.

I came to see that curricula needs to be approached from within the discipline first, providing solid grounding in the subject area before attempting to make connections between disciplines. If students are to develop a deeper understanding of the material, making it more likely that they will retain it and form connections among concepts, the knowledge base within the discipline must be built logically and sequentially, not tossed together because it fits a theme. As Clark and Callow (1998) postulate: "systematic planning, organisation and management of learning ... is considered to be an essential

aspect of effective and efficient teaching" (p. 90). This fits the information processing approach which "emphasizes that children manipulate information, monitor it, and strategize about it...children develop a gradually increasing capacity for processing information, which allows them to acquire gradually increasingly complex knowledge and skills" (Santrock et al., p. 238). I believe that this approach also prepares students for standardized testing as content is at the root of the instruction all along.

Yet, how could I reconcile this with my KNOW and DO? I felt strongly that it was important to assist students to draw connections not only between subjects but also to their own experiences along the way. During an informal discussion with a friend completing postgraduate work in Neuroscience, I wondered aloud whether teaching in a more traditional, disciplinary manner would better serve my students. He reminded me again of the importance of connections and holistic learning by directing me to the following report:

> Scientific evidence—largely from the field of neuroscience, which concerns our basic biology and how our brains develop—shows that the human child is "wired to connect". We are hardwired to connect to other people, to moral and spiritual meaning, and to the openness of the transcendant. Meeting these basic needs for connection is essential to health and human flourishing.
>
> (Report to the Nation from the Commission on Children at Risk: YMCA of the USA, Dartmouth Medical School, Institute for American Values, 2003, p. 8)

The information processing approach also indicates that it is essential to help students make these connections. The connectionistic model proposed by Rumelhart and

McClelland (1986) emphasizes the fact that information is stored in multiple locations throughout the brain in the form of networks of connections. The more connections to a single idea or concept, the more likely it is to be remembered. Self-reference is also an excellent way of elaborating information and deepening understanding (Santrock et al., 2004).

It was then that I had the idea to help students create a visual representation of the connections they were making to their personal lives, stories, and other subject matter. At the end of each week, students would be asked to use colour-coded paper to record their personal connections. This is similar in spirit to the reflection cards Chappuis (2005) suggests using as a "ticket out" of class. One colour would be for personal connections, another to text, and yet another to other subjects. They would share these with the larger group and we would record them on our know, learn, do chart, as seen in Figure 5. Students would write their connections on slips of paper that could be tagged to the chart and then later stapled together to form a chain that would run along the walls of the classroom, serving as a visual reminder of both the many connections we had made and the importance of making connections to learning.

Letting go of full-scale integration and seeing my planning and assessment as discipline specific with the goal of making connections once "the basics" had been addressed logically and sequentially allowed me to move forward in a more realistic manner. I felt freed from my good/bad paradigms of progressive and traditional teaching. I felt free to use the provided texts for each subject and my discipline-specific long-range

What we KNOW	What we want to LEARN	What we want to DO

What we LEARNED	CONNECTIONS

Figure 5. Sample connections chart

plans, knowing that I would be helping students to make connections throughout the units and, again, in a more intensive way, at the end. To refer back to my mother's advice: I had finally found my middle ground. I felt free to move forward without reinventing all that I had previously done. This had been a major obstacle in my work with Drake et al. (2002). We had attempted to create everything from scratch and, in the end, could not find the time to complete the units—even over the 10 month period we worked. Obviously, this was not a practical approach.

Aligning Instruction and Assessment: A Six-Step Model

"Imagination is more important than knowledge."

~Albert Einstein

"To begin with the end in mind means to start with a clear understanding of your destination."

~Stephen Covey

In this chapter, I present both my six step planning process and how I came to it. Although I frequently found myself moving back and forth between them, these stages have been numbered chronologically for ease of reading. The following section draws upon the work of Grant Wiggins and Jay McTighe (1998) in *Understanding by Design* and the work of Susan Drake and Rebecca Burns (2004) in *Meeting Standards with Integrated Curriculum*. This model is critically different from the work of Wiggins and McTighe (1998) in that it includes an integrated assessment task for the term and uses the KNOW, DO, BE framework to identify the desired learning results for the term. It differs from Drake and Burns' model because it approaches learning from within the subject areas first and includes a culminating task for each subject area prior to the integrated

assessment task. It diverges from both by making use of Curry and Samara's (1995) differentiation planner to plan learning experiences and daily instruction and assessment.

An overview of my six-step planning model:

Step 1- Identify Broad Based Expectations and Units of Study

Step 2- Develop Culminating Tasks for Each Subject Area

Step 3- Identify a Common Theme and the Interdisciplinary KNOW and DO

Step 4- Develop an Integrated Assessment Task for the Term

Step 5- Determine Evidence of Understanding and Assessment Criteria

Step 6- Develop a Lesson Sequence for Daily Lessons and Assessment

Step 1- Identify Broad Based Expectations and Units of Study

I began by reviewing my existing long-range plans, originally developed in consultation with my teaching partners in 2001. I identified the broad-based overall expectations for the term. In this manner I was able to organize the Grade 4 Ontario curriculum (Ontario Ministry of Education, 1998) expectations in a way that drew my attention to the critical learning targets for the term. The revised long-range plans are shown in Appendix A.

Since this time, I have come across a similar template in the work of Cooper (2007). He goes beyond the broad-based expectations to identify the big ideas/ essential skills for each subject area. This aligns nicely with the first step of the design down approach of Wiggins and McTighe (1998): What do you want students to know, do and be by the end of the unit?

Further, I believe it would be helpful to see the common concepts across the subject areas. It is also a direction our Ministry of Education is moving in, as is evident in

the revised Ontario Curriculum Social Studies document (Ontario Ministry of Education, 2004) which identifies the fundamental and related concepts, stating that:

> the conceptual framework within which topics are presented remains consistent throughout the curriculum, from Grades 1 to 12, and gives continuity to students' learning. As students progress through the curriculum, they extend and deepen their understanding of these concepts and learn to apply this understanding with increasing sophistication" (p. 3-4).

Thus, I would add these big ideas/ essential skills to this template.

Step 2-Develop Culminating Tasks for Each Subject Area

Drake and Burns (2004) suggest that the next step is to develop integrated mini-units. In the past, I had attempted to follow this format and found myself overwhelmed. Too many complex performances left both my students and I exhausted and students were often frustrated because I was asking them to apply knowledge and skills from a variety of subject areas while they were still struggling to master the basics. I had also struggled with pulling grades apart to link them to the report card. Instead, I developed culminating tasks for each subject-specific unit as shown in Figure 6.

Wiggins (1989) argues that teaching to such well-constructed tasks ensures that teachers concentrate on worthwhile skills and strategies. Students are learning and practicing how to apply important knowledge and skills for authentic purposes and these summative assessments clarify the targeted expectations for students (McTighe & O'Connor, 2005). This allayed my earlier concerns about teaching to the task in a manner similar to that of teaching to the test. I felt that, if I developed these within each discipline, connections would inevitably arise because this type of authentic assessment

CULMINATING ACTIVITY
Science/ Social Studies/ Art

The King has come to you and your group with a problem. He has discovered the perfect place for his castle, but it is on an island (your bristol board circle) located in the middle of a rocky, rapidly flowing river. This is a great selling point for the King because it makes a moat unnecessary. However, the river is eroding one end of the island and it will need to be preserved so that the king can build his castle on the land.

Work with your group to design a plan that helps to reduce erosion along the shoreline. The King wants this done—use any materials you would like since cost doesn't matter. You might even want to consider using rocks or minerals. Make sure you explain why you chose the materials. After you have completed your design, test it out and report the results. Using the test results, improve the design if you can.

CULMINATING ACTIVITY
Social Studies/ Math/ Art/ Writing/ Oral and Visual Communication

You and your group will build a castle using recycled materials. The King wants a strong, attractive castle at a low cost. Check the price list carefully and keep careful records of how much money you have left to make sure you don't go over budget.

Make sure that your castle has at least 5 of the design features you learned to make it defensible. You will cover the completed castle in papier-mâché (at no cost) and paint it attractively. The King would like the windows in the keep painted with geometric patterns (use patterning blocks or a geoboard to create your designs before painting).

You will present your castle to the king. In the script you need to "sell" the king on the defensive and offensive features of the castle. You should also describe each room in the castle with a brief description of what happens there and who might use it (2-3 sentences). When describing people make sure you use their proper title (eg. lady, reeve). Remember to proofread your work before handing it in.

CULMINATING ACTIVITY
Math/Reading/ Social Studies

You and your group will compare the people of medieval times to the people of today. Create a compare/contrast chart focusing on the types of housing, jobs, recreation, food and dress.

To find information on medieval times you will need to look in your textbook, research books and on the Internet. You should also make at least 3 references to the descriptions of medieval life in the novel we are studying--"Castle in the Attic".

To gather information on our community today you will need to develop a list of survey questions that will help you learn about the type of housing, jobs, recreation, food and dress people choose. Each group member should conduct the survey with at least 3 adults. Record your information using a tally chart. Using the data from all of your group members, present the information in an appropriate graph(s) or chart(s) with mathematical labels.

Figure 6. Term culminating activities.

demands that students draw upon many real-world skills (such as presentation, research, etc.) outside the boundaries of the discipline. Authentic assessment has become increasingly popular, as a perception has grown that there is a need for more holistic approaches to evaluating students (Wiggins, 1990; Karge, 1998; Morris, 2001; Prestidge, Williams, & Glaser, 2000). Authentic assessment captures aspects of students' knowledge, deep understanding, problem-solving skills, social skills, and attitudes that are used in a real-world, or simulation of a real-world situation. Authentic assessments set meaningful and engaging tasks, in a rich context, where the learner applies knowledge and skills, and performs the task in a new situation. Authentic assessment allows for directly measuring student achievement on important, appropriate tasks through active and flexible learning methods. Campbell (2000) terms this 'authentic education', which is based on performance and reality.

I saw these real-world skills as essential to moving from knowing to understanding but previously had no clear vision of how to teach or assess them. I did not even have a clear definition of understanding: How does understanding differ from knowing? Perkins and Blythe (1994) discuss the idea of performance-based learning and clarify how this type of learning fosters understanding, rather than knowledge:

> Understanding is a matter of being able to do a variety of thought demanding things with a topic—like explaining, finding evidence and examples, generalizing, applying, analogizing, and representing the topic in a new way…understanding is being able to carry out a variety of "performances" to show one's understanding of a topic and, at the same time advance it. (p. 6)

I attempted to follow these dictates regarding what Perkins and Blythe (1994) term "understanding performances." I wanted to ensure these tasks went beyond the KNOW. The tasks demand that students apply their knowledge in a new context, yet, I felt confident that each task was reasonable. Further, I felt certain that my daily lessons, (some I had previously taught, some taken straight from the texts) would ensure that students were well equipped. Because the tasks were authentic, they naturally integrated other subject areas, which I listed as secondary subjects.

I also sought to ensure that these tasks would be both valid and reliable as this is one of the limitations often cited with using authentic assessment (Tanner, 2001). Validity of a test or task is the degree to which a test measures what it is intended to measure. Reliability is the degree to which a measure yields consistent results (Airasian, et al, 2007). Wiggins (1998) suggests a simple two-question technique for ongoing analysis of an assessment task in order to assess its potential validity and reliability. The questions are:

1. Could the student do well at the task for reasons that have little to do with the desired understanding or skill being assessed?
2. Could the student do poorly at the task for reasons that have little to do with the desired understanding or skill? (p. 32)

In other words, does the assessment task match the learning program that the students have been engaged in and the rubric that is being used when assessing? This is often referred to as alignment: the correspondence between assessments and expectations. Curriculum alignment is central to good teaching and has been shown to be a factor in increasing standardized test scores (Darling-Hammond & Bransford, 2005; Elmore &

Rothman, 1999; Mitchell, 1998). The term itself is often used by publishers of traditional tests, who use it to match questions to standards, although these tests frequently refer only to a narrow subset of expectations. Shepard (2003) suggests the term embodiment to define the more complete alignment that occurs in authentic assessment.

Using Wiggins and McTighe's (1998) design down approach meant that the tasks were developed in light of the broad-based expectations identified in the long-range plans. This addressed the issue of reliability as the culminating activities embodied the curriculum and fit the expectations identified. These expectations served as targets for students. Thereby, the validity of the tasks could be determined throughout the teaching process by looking at how closely students were hitting these targets (Stiggins , 2005). The closer to the target, the stronger the validity.

Step 3- Identify a Common Theme and the Interdisciplinary KNOW and DO

I looked across the culminating activities and subject areas for a common theme/concept for the term. This is known as the "Big Idea" in interdisciplinary work and is defined as an abstract concept represented by one or two words (Drake & Burns, 2004). I saw that *change* was a fundamental concept in both the social studies and science curriculum and could be applied in math and language as well.

I have summarized the KNOW, DO, BE for the term in Figure 7. I identified the enduring understandings for the term (the KNOW). An enduring understanding, as defined by Wiggins and McTighe (1998) is an idea that resides at the heart of learning and has lasting value outside the classroom. It is an idea that will endure long after the unit is over. These often spiral throughout the curriculum and cross curriculum boundaries. I expressed these enduring understandings as:

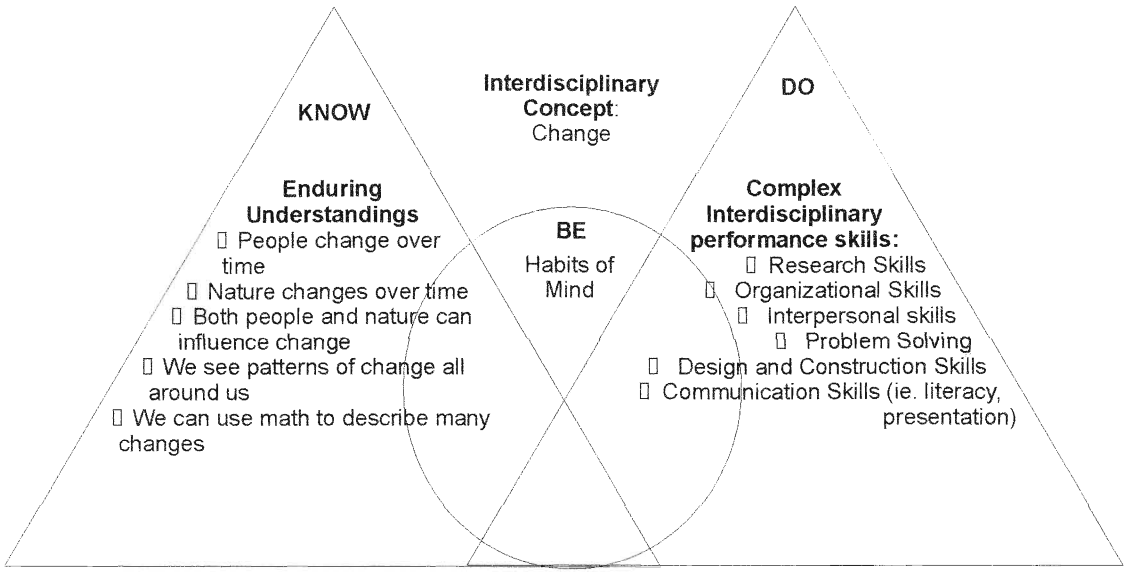

Figure 7. Term 1 KNOW, DO, BE.
Note. From *Meeting standards through integrated curriculum*, by S.M. Drake and R. Burns, 2004, Alexandria, VA: Association for Supervision and Curriculum Development. Copyright 2004 by Susan Drake and Rebecca Burns. Adapted with permission.

- People change over time
- Nature changes over time
- Both people and nature can influence change
- We see patterns of change all around us
- We can use math to describe many changes

Next, I identified the interdisciplinary skills students would need (the DO). These skills are not related to any particular subject area. Instead, they are skills that are needed both in school and in real-life to complete complex tasks (Drake & Burns, 2004). Whereas, in the past I had struggled to identify the KNOW and DO from a sea of expectations, they came very easily to me as I studied the naturally integrated culminating activities alongside the list of broad based expectations from my long range plans. Students would require:

- Research Skills
- Organizational Skills
- Interpersonal skills/Communication Skills (ie. literacy, presentation)
- Problem Solving
- Design and Construction Skills

Step 4- Develop an Integrated Assessment Task for the Term

Subsequently, I developed an integrated assessment task that encompassed these enduring understandings and interdisciplinary skills. Once again I tried to follow the dictates of Perkins and Blythe (1994) term regarding "understanding performances" and to ensure validity and reliability through alignment with the KNOW, DO, BE (Drake, 2007). This task is shown in Figure 8.

INTEGRATED ASSESSMENT TASK

In "Castle in the Attic" William travels through time using the miniature castle his nanny gave him. You and your partner will create a puppet play that tells the story of a boy or girl who travels back in time. Make sure that through your script, your puppet design, music selection and background design you show an understanding of:

- How the land has changed over time (eg. geography, climate, land use, erosion);
- How the people have changed over time (eg. housing, social structure, recreation, food, dress, government, conflict).

Make sure you use your notes from science and social studies and the data we gathered on our community in math to help you make your comparisons. Use the comparison chart you created to help you. You may need to do some additional research.

You will hand in your first draft by _____. Use the notes your teacher makes to revise and edit your work to make it better.

You should have your script ready for approval by _____. Once your script has been approved you may begin to design your puppets, props and scenery using any materials you wish. You might include the castle you made earlier.

The date of your final presentation will be _____.

Figure 8. Integrated assessment task.

Step 5-Determine Evidence of Understanding and Assessment Criteria

In my earlier work with Drake et al. (2002), we had developed a culminating task for each unit but we had failed to develop assessment criteria. In contrast to norm-referenced assessments, which compare a student's performance to that of others, criterion-referenced assessments are designed to compare students' performance against learning task standards. Criterion-based standards are necessary to maintain authenticity (Tanner, 2001). I saw this as a very significant "missing link" in our earlier work. Why had we failed to do this? Again, I think time was the greatest obstacle. As I sorted through the overstuffed binder full of the many different rubrics and authentic assessment tools I have collected and created over the years to find one that might "fit" the task, I realized that most of my rubrics included the same basic skills and descriptors and that, perhaps, as Damian Cooper (2007) writes:

> less is more', or, more correctly, fewer is better...Fewer rubrics makes it easier for students and teachers to internalize the standards...Too many rubrics for students result in too many targets while too many rubrics for teachers leads to an unmanageable assessment load. (p. 192)

I felt that using fewer rubrics would save me time as I would not have to develop a new rubric each time and this efficiency would allow me to spend more time offering valuable feedback to students that could inform their work in the future by highlighting the students' strengths, weaknesses, and areas of growth. Additionally, I believed that, in using the same rubric components over and over, students would be more likely to see growth. For example, if a student receives a level 1 for research skills, my comments could specifically address how to improve. He or she could then attempt to make these

changes for the next assignment confident that the definition of the criteria would not change. Lorna Earl (2003) calls this assessment *for* learning (diagnostic and formative), designed to help modify instruction and to help students identify areas of improvement. This model requires that teacher and student have a shared understanding of the goals of learning (Darling-Hammond & Bransford, 2005). The importance of meaningful feedback was identified as early as 1931 by Thorndike, and assessment *for* learning, or formative assessment, was first defined by Scriven (1967). Yet, it is only in recent years that it has received much attention (Black et al., 2003).

I defined the set of skills that would be needed across the subject areas and defined these skills for students. I called this my criterion "bank" and have included it here in Figure 9.

This is similar in spirit to a generic rubric as suggested by Cooper (2007) and Marzano, Pickering, and McTighe (1993). However, it was not designed as a rubric to be used with every task. Rather, it is a repository of criteria from which I can quickly and easily draw upon to create a rubric, checklist, or checbric that best fits the task. I tend to prefer using a checbric over the more commonly used rubric as it is a combination of a checklist and a scoring rubric where the presence or absence of a particular trait is noted in one column followed by the assessment of that trait's quality in the other column. Students use the "chec" column to self-assess, while teachers use the "bric" column to indicate the level of the student's performance (Lewin & Shoemaker, 1998). The content or knowledge portion would be easily added or adapted to fit the curriculum expectations using the ministry guidelines and achievement charts. Thus, individual assessment tools will differ but the definitions for the criteria within would always be the same—and these

MY CRITERION "BANK"

LEVEL 3 PERFORMANCE
Content I/we have a good understanding of the topic. *N.B. This section will change to reflect curriculum expectations.*
Research Skills I/we gathered research from more than one source (ie. books, the Internet, and/or encyclopaedias.) I/we often recorded information using jot-notes and organized these in a chart. I/we understood the information and can explain it in my/our own words.
Interpersonal Skills I/we communicated effectively with group members I/we encouraged others to stay on task I/we contributed ideas frequently I/we invited others to participate I/we came to the group prepared.
Communication Skills I/we communicated solutions clearly I/we included complete explanations, opinions and supporting details I/we used the required format.
Problem Solving Skills I/we brainstormed a variety of solutions in variety of ways (eg. sketches, maps, lists) I/we selected the best solution from the alternatives while considering most of the criteria I/we selected and recorded the most appropriate methods, materials, equipment and tools.
Design and Construction Skills I/ we constructed a solution that fully represented the plan and met most of the design criteria I/ we demonstrates most of the appropriate techniques of construction I/we used materials, equipment and tools safely with little supervision
Organizational Skills I/we made sure information focused on the topic I/ we saw how all the parts fit together I/we presented ideas in an acceptable order and made it pretty easy for the audience to follow the presentation. I/we had an opening "hook" and an ending that really worked.
Literacy Skills *I/we developed ideas using details, examples or personal experiences* I/we used paragraphs I/we used a variety of sentence types I/we made few errors in punctuation and/or spelling.
Presentation Skills I/we spoke clearly and loudly enough that the audience could hear I/we spoke with expression and used facial expressions and gestures to improve the presentation I/ we made eye contact regularly.

Figure 9. My criterion bank.

common criteria would be posted prominently on the classroom walls throughout the school year.

Rather than include descriptors for all four levels of achievement, I chose to simply identify what, to me, would merit a level 3—the stated objective. Although I developed the initial bank, I intended that, as a class, we would discuss each skill and rewrite the descriptors in more meaningful, student friendly language as we collaboratively created the criteria we would use to assess student work. Leahy, Lyon, Thompson, and William, (2005) comment: "Many teachers address this issue by posting the state standard or learning objective in a prominent place at the start of the lesson, but such an approach is rarely successful because the standards are not written in students-friendly language" (p. 21). I feel that this discussion is often richer if students are provided with this single descriptor and are then asked to identify how a level 2 and level 4 product or performance would differ. Leahy et al. and Chappuis (2005) suggest using a selection of sample work at all levels of achievement to help students identify the broad criteria and quality descriptors. It is important that students understand the criteria for success as this allows the students to bridge the gap between what they can do now and what they need to do. Involving students in this dialogue makes feedback meaningful and gives students ownership of their own work (Hall & Burke, 2003).

Step 6-Develop a Lesson Sequence for Daily Lessons and Assessment

The greatest obstacle in my implementation of the curriculum developed with Drake et al. (2002) was that we had not really completed the planning process. We had not moved from the larger framework to look at the content of daily lessons and assessment. Thus, when it came to writing up my daybook each week I looked longingly

at the integrated task we had planned, thought of the time needed to prepare it, and often fell back upon the quickest way to fill the spaces—a page number from the text.

I developed lesson sequences for each subject using my own simplified adaptation of Curry and Samara's (1995) differentiation planner. Six levels of thinking expand the students' ways of thinking about content, and encourage students to think about thinking skills. The levels of thinking are divided into two parts: basic and abstract levels of thinking. I chose the differentiation planner because I felt that it would help me meet my goal of teaching thinking skills. Differentiating curricula has been widely recommended in the literature as being an effective strategy to address academic diversity (Morelock & Morrison, 1997; Plucker & McIntire, 1996; Tomlinson, Moon & Callahan, 1998; Tomlinson, 1999). A number of studies have identified that instruction that focuses on higher order conceptual development can positively affect student achievement (Chang et al., 1998). Further, Cole (1990) identified that school improvement efforts that taught and assessed higher-order thinking skills were more successful in increasing student performance. The model itself has been extensively researched and has been shown to contribute to improvement in standardized test scores, particularly in low-income areas (Connell, 2003; Curry, Samara, & Connell, 2005; Henderson, 2000). I particularly liked how Curry and Samara's (1995) planner provided me with a list of product and performance suggestions right at the top so that it was easy to see how my lessons could be adapted. Organizing my unit into a series of smaller mini-units, I identified and weeded out the fun, but superfluous, activities I had previously included because they did not connect to the expectations. Thus, I thought and acted like an assessor rather than an activity designer.

My assessment had also suffered in the past. I heavily overused summative assessments because I had no plan for the many formative assessments that serve as the building blocks to prepare students for the culminating task. Sometimes the criterion for these summative assessments was not developed until I had actually collected the work so it provided little guidance to students. While formative assessment was occurring in my classroom in the form of observation, conferencing, questioning, comments on work and self and peer assessment, it was often conducted "on the fly." Thus, I ended up with a pile of disjointed notes and grades and students often ended up ill prepared for the task and, worse, ill informed about their own learning. This was particularly sad for the lower-achieving students. Although I was spending a great deal of time marking work and handing it back on a regular basis, the many numbers recorded neatly in columns in my gradebook seemed to change little. Good students continued to be good students. Low-achieving students continued to be low-achieving students. All my time and effort did not seem to be moving anyone forward. Black and William (1998) would argue that I was ineffectively managing formative assessment. These authors made a very convincing case for formative assessment after completing one of the most extensive reviews of formative assessment to date, studying work in 160 journals, 580 articles or chapters and material from 250 sources. They concluded that:

> improved formative assessment helps low achievers more than other students and so reduces the range of achievement while raising achievement overall...frequent assessment feedback helps both groups enhance their learning... While formative assessment can help all pupils, it yields particularly good results with low

> achievers by concentrating on specific problems with their work and giving them a clear understanding of what is wrong and how to put it right. (pg. 140-143)

In light of this, I identified the assessment component of each lesson. Most are formative. I also chose to highlight a number of "checkpoint" lessons. These were lessons that I identified as being particularly significant to the culminating task, as well as to the enduring understandings and the integrated performance task. In these I also saw opportunities to explicitly teach cooperative skills. These lessons would include a specific debrief wherein students would take a critical look at their understanding of the subject matter and/or cooperative skills. Students would respond to a series of debriefing statements orally or in writing and I would also share some of my observations with students. By identifying these checkpoints, I felt more confident that these important skills and understandings would be addressed and would be less likely to fall by the wayside in the grind of daily planning.

While many lessons remained much the same as those I had taught in previous years and others came straight from the text, I was now able to see at a glance how much or how little I was emphasizing higher-order thinking skills and this often pushed me to tweak the lesson. Each mini-unit builds upon previous content and progresses from lower-order to higher-order thinking skills. The differentiation planner created for the Rocks and Minerals unit has been included in Appendix B as a sample.

Teaching and Assessing the BE

"Values are like fingerprints. Nobody's are the same but you leave 'em all over everything you do"

~Elvis Presley

"We are what we repeatedly do. Excellence then, is not an act, but a habit."

~ Aristotle

I felt I was on the right track assessing the KNOW and DO. The six step planning model I had created adequately addressed Assessment *of* Learning. That is, summative assessment, aimed at certifying learning and providing information for parents about where their child stands in relation to others. My culminating activities and integrated performance tasks were authentic tasks that had been developed in line with the curriculum expectations. They were useful, engaging, and reflective activities. I had considered assessment *for* learning (diagnostic and formative) both in my rubric design and in my daily lessons. Yet, I had made no reference to the BE. Drake and Burns (2004) define the BE as:

> …reflect[ing] what an individual does with the KNOW and DO. What values do the student's actions reveal? Does he, for example, learn about ecosystems but behave irresponsibly toward the environment? Is she disruptive when she works in a group, although she is learning collaborative problem-solving skills? (p. 35)

I knew I needed to move beyond assessment *of* and *for* leaning to really get at the heart of the BE. Lorna Earl (2003) discusses her vision of assessment as an integral part of learning, designed as a part of the instructional process to guide future learning. She describes the three purposes of assessment as: Assessment *of* Learning, Assessment *for*

Learning, and Assessment ***as*** Learning, which occurs when students monitor their own learning and use feedback to improve their understanding. Earl writes,

> Assessment as Learning is a personal affair. Students and teacher decide (often together) about the important evidence of learning and how it should be organized and kept. Students routinely reflect on their work and make judgments about how they can capitalize on what they have done already. Comparison with others is almost irrelevant. Instead, the critical reference points are the students own prior work and the aspirations and targets for continued learning. (p. 25)

Earl (2003) claims that often teachers who struggle with the conflict between monitoring and categorizing students and teaching are simply not getting the balance right. She describes a traditional assessment pyramid as having assessment *as* learning at the pinnacle, or the smallest part. She then offers reconfigured assessment pyramid, which moves assessment *as* learning to the base and assessment *of* learning to the top. She suggests that this reconfiguration can ease the tension by focusing more an assessment *as* learning without causing major upheaval.

I wanted to reconfigure my practice to focus more on assessment *as* learning (promotes student learning). Interestingly, early in this work, I had blended Susan Drake's KNOW, DO, BE model with Earl's (2003) reconfigured model. I saw Earl's reconfigured pyramid as a balance point for good instruction and sketched a sort of scale in my notes (see Figure 10).

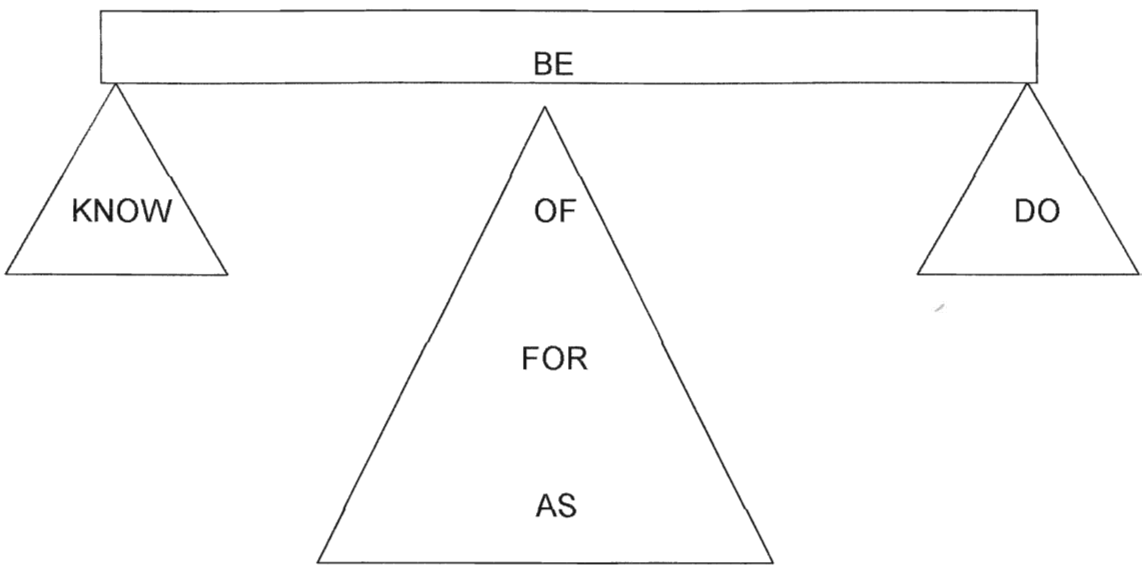

Figure 10. Assessment as balance point.
Note. From *Meeting standards through integrated curriculum*, by S.M. Drake and R. Burns, 2004, Alexandria, VA: Association for Supervision and Curriculum Development.

Perrenoud (1991) also writes about a shift in the balance point of assessment:

> A number of pupils do not aspire to learn as much as possible, but are content to 'get by', to get through the period, the day or the year...Formative assessment invariably presupposes a shift in this equilibrium point...Every teacher who wants to practice formative assessment *must reconstruct the teaching contracts so as to counteract the habits acquired by his pupils.* (p. 92, emphasis in the original)

As I worked through the process, I came to see that assessment *as* learning was a form of formative assessment that was about developing habits of mind: goal setting, reflection, personal growth, etc. I believe that teachers must set the foundations for knowledge and skill development with a strong focus on habits of mind to ensure that students are developing the tools to both understand the material and live a balanced, happy life. This is the reason it is important that I develop a KNOW, DO, BE outline for the term rather than contenting myself with the curriculum expectations and discipline specific knowledge and skills. The BE sits in the centre of the KNOW and DO in my model, crossing boundaries and infusing all that I teach. The BE is so deeply embedded in all aspects of teaching and learning that it cannot be presented as a separate entity. Assessing the BE cannot be simply another step in the process. Earl's (2003) goal is that "assessment [be] a large part of the school day, not in the form of separate tests, but as a seamless part of the learning process" (p. 27-28).

I have always held regular class meetings but now saw them as more than a venue to solve the problems students had with one another. I wanted to use these meetings to teach the habits of mind I feel are essential and had decided on Covey's (1989) 7 habits as a framework. I had previously tried to teach students these habits and found that they

were a powerful way to present the many organizational, cooperative, and social character values I wished to impart. I was inspired by the story Covey tells of A.B. Combs Elementary School in North Carolina, which implemented a principle-based character-training program based on the seven habits with impressive results. In just 18 months national measurements showed grade levels had moved from 67% of students performing at or above average to 94% with the introduction of character principles into the classrooms (Covey, 2004).

However, in the past, I had introduced only one habit at a time and in addressing each habit consecutively, I discovered that the hidden message for students was: "Don't be a goal setter, caring person, etc. –we'll learn those next month." I decided to spend as much time as was needed at the beginning of the year to introduce students to these habits. We would complete T-charts demonstrating what each habit looked like and sounded like, watch videos clips, and participate in role-playing, discussion, and activities to define and reinforce each habit. Since "the Habits of Mind are most evident when we ask students to manage their own learning" (Costa & Kalllick, 2000, p.5), I would expect students to reflect upon their use of these habits routinely through the use of a "Habits of Success" weekly report on the back of our class weekly news (see Appendix C). The habits—called the ABC's of success, are based on a revision of Covey's Seven Habits of Highly Effective People, written by Premier Agenda (www.premieragenda.com) in 2003. These reports would be kept in a Habits of Mind Portfolio. The use of portfolio assessment promotes self-reflection and allows students to understand themselves better as learners (Chappuis, 2005). Students would create and review this portfolio on a regular basis to self-assess and reflect upon their own progress.

They would be required to sort through work samples, self and peer assessments, pictures, and other artifacts collected from home and school to determine their learning goals, the steps taken towards those goals, and how far they had come (Chappuis). For example, students might include a page from their student organizer showing how they planned their time to practice for a violin recital alongside a 1st place certificate, or use a peer report that congratulated them on great group work to demonstrate how they "dared to care." After reading Cooper's (2007) work, I also had the idea to use a reflection strip similar to his to help students reflect upon their "evidence" of each of habit. My revised sample of the reflection strip is shown in Appendix D. True to assessment *as* learning, no mark would be assigned to this portfolio but it would be used as a focal point for conferences with the students and parents.

CHAPTER SIX: CONCLUSION

We must never cease from exploring. At the end of all of our exploring will be to arrive at where we began and know the place for the first time.

~T.S. Eliot

Life is a journey, not a destination.

~Ralph Waldo Emerson

Ultimately, this work has been about rediscovering myself. It has been about reclaiming my philosophy and finding not only the framework, but also the confidence that would allow me to align my theory and practice. Five years of teaching had taken the views of the naïve, over-confident teacher candidate and bashed them against the rocks of reality. To make reference again to my metamorphosis, I was merely a caterpillar seeing only my own small struggle. I believe that this work has enabled me to soar above the obstacles and find my path. I have reaffirmed my own constructivist, holistic views and feel comfortable in approaching curriculum design using a *multi*disciplinary (rather than *inter*disciplinary approach) that uses a big assessment task and a cross-curricular connections chain to help students see how their learning connects. Best of all, I found a way to save time, give new life to my current teaching practices without "reinventing the wheel", and still embrace differentiated instruction, experiential learning, and assessment *of, for*, and *as* learning.

I anticipate that, in the future, I will be buffeted by the winds of educational reform, yet, I feel that I have a better understanding of how these reforms may fit into my practice and a greater confidence in my own judgment as an elementary teacher. I know now that I can improve my understanding of how people learn and that through

questioning my practice I can be more effective as a teacher. It is against this supportive background that I am able to take risks to try to improve my own practice and try to live out my values more fully.

New Questions

Since the initial submission of this work, I have again reconceptualized the KNOW, DO, BE framework. I felt that, although I had commented on the importance of teaching thinking skills and learning strategies in my work, they had been left out of the framework. so I added them to the DO. I felt that disciplinary skills and lower-order skills seemed out of place in this triangle because these skills are really more about content than about thinking and performance. I saw a place for them in the overlap between KNOW and DO (see Figure 11).

I also found myself wondering if the word 'reflection' was a little too similar to the word 'metacognition' when I want it to express more. More than thinking about thinking, I intend it to mean a greater self-awareness. I borrowed the term reflexivity from qualitative research methods, which includes reflecting upon the ways in which our own values, experiences, interests, beliefs, political commitments, wider aims in life and social identities shape us as people (Willig, 2001). It is about how thinking and learning change us, as people and as learners and encourages us to reflect upon our assumptions about the world as well as our knowledge.

I also feel that further research needs to look at how curriculum models, such as this, must differ to ensure developmentally appropriate practices. My teaching experiences center mostly around grades 2-4, a unique time in children's lives—a time currently defined as the end of the "early years" and as the age of reason, by the Catholic

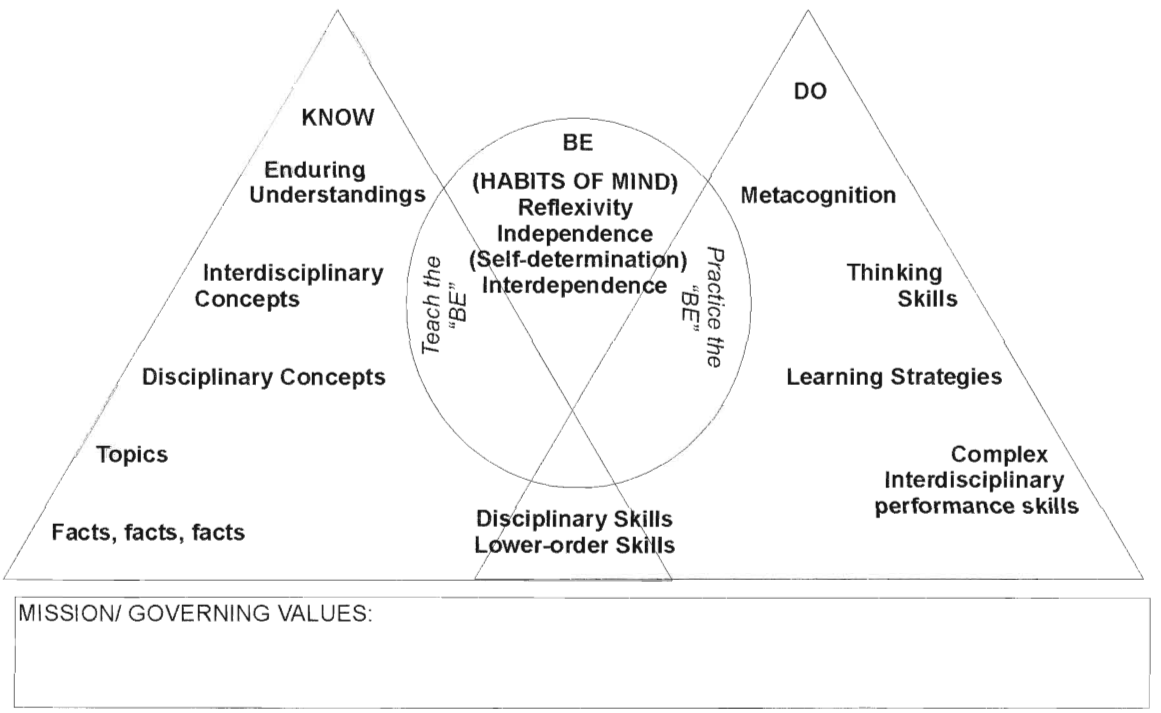

Figure 11. Reconceptualization of the Reconceptualized KNOW, DO, BE.
Note. From *Meeting standards through integrated curriculum*, by S.M. Drake and R. Burns, 2004, Alexandria, VA: Association for Supervision and Curriculum Development. Copyright 2004 by Susan Drake and Rebecca Burns. Adapted with permission.

Church since ancient times (Elkind, 1994). Is this a unique time in children's lives that lends itself to a type of curriculum model distinct from early primary years and intermediate/senior years? I think the question begs further exploration.

Implications for Future Practice

In January of 2006, after a year of maternity leave, I returned to work and a new chapter in my life and in this work began. As a working mom teaching halftime, I found my practice both enriched and restricted by my experience as a mother. Time was an even more critical element in planning and implementing curriculum. I was teaching only science and art to three different classes, thus integrating the curriculum in the manner I had hoped to would have meant that I needed to meet with the other teachers (who were new to the grade) outside of class and preparation time—something I was unwilling to do as I wanted to be home with my family.

In future years and different circumstances, I can see how this model could realistically work even where teachers specialize in a subject area. Each teacher could bring his or her skill set and understanding to the table and an integrated task (rather than a whole unit) could be developed cooperatively in a matter of hours. Each teacher could then return to the classroom and work towards equipping students with the knowledge and skills they would need to complete both the subject-specific culminating activity and the integrated assessment task. Finding time for students to complete the task and assigning marks to the report card would also be much easier when efforts were focused on one task rather than spread across a whole unit.

I did use the Rocks and Minerals unit created with the differentiation planner and found that my students performed significantly better on the culminating task. Although I

was not teaching social studies at the time I still used the medieval times themed culminating activity and students were very motivated by this fantasy context. In the future, I would like to share the plan with the students at the beginning and have them brainstorm ideas for each mini-unit so that we are constructing the curriculum together. I wonder also if it would be beneficial to include not only the social skills but also thinking skills and strategies I wished to focus on in 'checkpoint' lessons.

I was really excited about how the connections chain, explained in chapter five, helped students to see beyond the subject I was teaching and to make some fascinating insights. At the end of each week we recorded "What we learned" on a chart together. Students then reflected upon this information and tried to make connections to other subject areas and to real life. For example, when we learned about erosion, one student made a connection to her grandparent's home built on Lake Erie. We discussed it in class and students demonstrated such an interest that the student took pictures to share with the class and her grandfather wrote a letter explaining some of the problems they had with erosion and included some older pictures to show what the area looked like when they bought the house 50+ years ago. The chain stretched across all four walls of our classroom by the end of the unit and proved an invaluable review before our culminating task and unit test.

The connections chain proved to be a powerful vehicle for formative assessment. Improvement in my formative assessment practices happened almost inadvertently as a result of this work—this was due, in part, to the question I was asking and, in part, to the dramatic shifts that occurred in thinking about assessment while I was writing. The seminal work of Black and William (1998) found that focused efforts to improve

formative assessment produced learning gains equivalent to raising the score of an average student from the 50th to the 85th percentile. I know that the connections chain, and the discussion, questions, and reflection around it, made a difference for my students and for me. I was asking better questions, students were thinking more, and we were all working as a community of learners. The lines between teacher and student as well as instruction and assessment often began to blur. I could make decisions to review material, help to clarify their understanding, or to provide appropriate support for those students struggling with the concepts as needed.

Thus, I am encouraged to explore formative assessment more deeply in my future teaching practice to help students grow and take charge of their own learning. I have always seen myself as a facilitator, more than a "teacher." It has always been my goal to guide, to scaffold, and to support. Formative assessment and scaffolding are strategies that work together to move students forward (Shepard, 2005). Already, I am energized by the practical suggestions that can be found in the academic literature. For example, Leahy et al. (2005) recommend using red or green flash cards to indicate understanding during a lesson. This echoes a similar idea presented by Atkin, Black, and Coffey (2001) to have students "traffic light" their work using coloured dots to indicate the level of help needed.

A New Adventure

This work was about reflecting on my practice as a teacher, striving to understand that practice better, and attempting to improve it. I needed to situate myself within the climate of the system—a system that seemed to be getting more and more traditional as teachers sought to meet the public demand for accountability. Referring back to a journal entry written in 2002 I had recorded: "When the pendulum of educational reform swings

once again, allowing for a more holistic approach, I intend to be the first in line to participate." This work was about not waiting. It was about claiming my own practice in the current context and having the confidence to exercise and defend my own professional judgment. It was about developing a vision and clarifying values; to no longer feel at the whim of pendulum reforms or to embrace change simply for the sake of change. Truthfully, I find it hard to part with, to hand in and know that it will be bound and viewed as complete when I feel that it will never truly be finished. This is merely a measure of where I stand today, and tomorrow brings a new adventure and another day to think and learn.

My new journey, my new adventure began in September of 2006 when I began teaching part-time at the Brock University Faculty of Education. Now, I must seek to clarify my best practices in order to "teach the teacher". When Adele Thomas, one of my thesis advisors, called me up out of the blue and asked me if I would be available and interested in teaching Classroom Dynamics, my initial thoughts echoed those of that beginning teacher: Why me? What do I have to bring to the table? Again, returning to the work of Williamson (1992), I asked: Who am I to influence the next generation of teachers: to change the very foundations of education, indeed civilization? This work gave me the confidence to respond: who am I *not* to?

Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning.

-Winston Churchill

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Appendix A

Term 1 Long-Range Plans

TERM 1	
SCIENCE	**Rocks & Minerals** (Sept- November) -demonstrate an understanding of the physical properties of rocks and minerals and the effects of erosion on the landscape; -investigate, test, and compare the physical properties of rocks and minerals and investigate the factors that cause erosion of the landscape; -describe the effects of human activity (e.g., land development, building of dams, mine development, erosion-preventing measures) on physical features of the landscape, and examine the use of rocks and minerals in making consumer products.
SOCIAL STUDIES	**Medieval Times** (Sept- December) -identify the distinguishing features of medieval society; -describe the impact of Christianity, the Crusades, Islamic culture, and the Magna Carta on medieval society; -describe the ways in which medieval society has influenced modern Western society.
MATHEMATICS **Number Sense & Numeration**	**Whole Numbers to 10000 & Operations:** *Addition: 2 four digit numbers* *Subtraction: a four digit number subtract a three digit number* -can understand and explain basic operations of decimals by modelling and discussing a variety of problem situations, -can select and perform computation techniques appropriate to specific problems involving whole numbers and decimals, and determine whether the results are reasonable ***Incidental practice & review of multiplication & division facts to the 9x table***
MATHEMATICS **Measurement**	Linear Measurement Money(incidentally through other subject areas)
MATHEMATICS **Geometry**	**Two and Three Dimensional Geometry** **Transform-ational Geometry** -can explore transformations of geometric figures, -can understand key concepts in transformational geometry using concrete materials and drawings
MATHEMATICS **Patterning**	**Geometric Patterns** -can identify, extend, and create linear and non-linear geometric patterns, number and measurement patterns, and patterns in their environment,
MATHEMATICS **Data Management**	Tally Charts Bar Graphs(incidentally through other subject areas)
READING	**Collections: Within My Circle** **Literature Circles: Castle in the Attic** **Research: Medieval Times** -decide on a specific purpose for reading, and select the material that they need from a variety of appropriate sources; -read aloud, speaking clearly and with expression;
READING **Mini-Lessons**	Read and view illustrations to predict and confirm meaning Develop and ask questions to confirm meaning and to predict story events Locating the theme or main idea in fictional text to increase comprehension Examine story elements to increase comprehension Examine ways the author sets mood in fictional text to increase comprehension Read to determine the accuracy of expository text Examine expository text structure to increase comprehension
GUIDED WRITING	**Personal Narratives (Journal Writing)** **Glossary** **Information/ Research Pieces (Medieval Times)** communicate ideas and information for a variety of purposes and to specific audiences (e.g., write a brief research report on a class investigation for classmates); -produce media texts using writing and materials from other media (e.g., a cartoon); -revise and edit their work -proofread and correct their final drafts
GUIDED WRITING **Mini-Lessons**	Writing Block Procedures The Writing Process Sentence Types Adding Details Making the Writing More Understandable & Interesting Nouns & Adjectives Punctuation/ Mechanics

Appendix B

Differentiation Planner

Differentiation Planner	**Knowledge** (Recall)	**Comprehension** (Understanding)
Lower Order Thinking Skills (L.O.T.S.) **Knowledge**: remembering information **Comprehension**: understanding and organizing previously learned information **Application**: using information in pertinent situations **High Order Thinking Skills (H.O.T.S.)** **Analysis**: thinking critically about information by studying its parts **Synthesis**: original thinking about information by putting its parts into a new whole **Evaluation**: making judgments about information based on identified standards	Process Suggestions •observe •state •describe •reproduce •recognize •name •experiment •define •tell •discover •recall • label •identify •uncover •match •list •outline •select	Process Suggestions •explain •give examples •restate •connect •conclude •summarize •describe •show •paraphrase •rewrite •convert •distinguish •translate
Unit Title: Rocks and Minerals ***Enduring Understandings:*** Rocks and minerals are everywhere and are essential and useful in our daily lives. Nature changes over time. Both people and nature can influence change.	Product Suggestions for Knowledge and Comprehension •model •advertisement •outline •diagram •commercial •speech •newspaper •song •plot diagram •book •poem •collage •checklist •play •Venn diagram •audio tape •chart •web •video tape •mural •poster •diary •comic strip •brochure	
Introduction to the Unit - demonstrate an understanding of the physical properties of rocks and minerals and the effects of erosion on the landscape; -describe the difference between minerals (composed of the same substance throughout) and rocks (composed of two or more minerals);	**1. Title Page and Intro. to the Culminating Task** Students will be introduced to the expectations and culminating task and will collaboratively develop the rubric to be used. Read pg. 2-3 of the text and will watch the Bill Nye movie on Rocks and Minerals as they begin work on a title page that identifies at least 5 things they already know about rocks and minerals and lists two things they would like to learn and do. Add student responses to the Know, Learn, Do chart posted at the front of the room. ASSESSMENT: rating scale	**2. What is a Rock?** Students will read and complete the worksheet "Rocks: An Introduction". Answers will be taken up as a class. Students will play a game of "Sponge Toss" to check for understanding after reading the text. Students will then use their understanding of this concept to explain in their science journals why an aero chocolate bar is not like a rock but a kit-kat bar is. ASSESSMENT: science journal (rubric)
Types of Rock -classify rocks and minerals according to chosen criteria, relying on their observations (e.g., colour, texture, shape); – recognize that there are three classes of rocks: igneous, sedimentary, and metamorphic; -follow procedures that ensure their safety by covering rock samples with a cloth when chipping and by wearing safety goggles;	**5. Types of Rock: Sedimentary** Discuss the meaning of sediment and put some soil, clay, sand & pebbles into a beaker. Add water and mix. Predict what will happen and let stand overnight. Read pgs. 11-13 of the text and will answer a series of oral recall questions. They will define sedimentary rocks in their science journals and will draw a diagram describing how these rocks are formed. ASSESSMENT: science journal (rubric)	**6. Types of Rock: Igneous** Discuss how volcanoes are formed and how they erupt. Discuss how igneous rocks are formed from volcanoes. Demonstrate how pressure builds up in a volcano using baking soda, vinegar and soap. Have students create a comic strip in their science journal showing how igneous rocks are formed. ASSESSMENT: science journal (rubric)
Testing Rocks and Minerals -test and compare the physical properties of minerals (e.g., scratch test for hardness, streak test for colour); – use appropriate vocabulary, including correct science and technology terminology, in describing their investigations and observations (e.g., use terms such as *hardness*, *colour*, *lustre*, and *texture* when discussing the physical properties of rocks and minerals); – compile data gathered through investigation in order to record and present results, using tally charts, tables, and labeled graphs produced by hand or with a computer (e.g., use a chart to record findings obtained through a mineral hardness test);		
The Rock Cycle -describe the effects of wind, water, and ice on the landscape (e.g., ice breaking rocks into soil), and identify natural phenomena that cause rapid and significant changes in the landscape (e.g., floods, tornadoes, heavy rainstorms); -investigate and describe ways in which soil is formed from rocks; – identify ways in which soil erosion can be controlled or minimized (e.g., by planting trees, by building retaining walls), and create a plan for reducing erosion of soil in a local field or plot;		**10. Rocks & Soil** Demonstrate for students how soil/sand is made from pulverizing rock. Place the rock between layers of newspaper and hammer gently. Have students guess what percentage of soil is made up of rocks and draw their guess as a pie chart. Read the information on pg. 26 and have students record a recipe for soil in their science journals. Then have students read and complete the experiment on pg. 27.
Uses of Rocks/ Minerals -identify and describe rocks that contain records of the earth's history (e.g., fossils), and explain how they were formed. -identify the many uses of rocks and minerals in manufacturing, and in arts and crafts (e.g., china, iron fences, soapstone carvings, jewellery, coins);	**14. History in Rock—Fossils** Have students read the information on pgs. 21-23 from the textbook and create a mind map in their science journal as they go. This will provide background information to complete Fossils, Big and Small as a CASI (reading) assessment. ASSESSMENT: science journal (rubric)	**16. Guest Speaker** Invite Greg Finn, geologist from Brock University to talk about the uses of rocks and minerals. Have students summarize his presentation by writing articles for our weekly newsletter (each newsletter will be individual this week). ASSESSMENT: news article (checklist)
CULMINATING ACTIVITY -identify ways in which soil erosion can be controlled or minimized (e.g., by planting trees, by building retaining walls), and create a plan for reducing erosion of soil in a local field or plot; -design, build, and test a system to control the effects of soil erosion		

Application (Use)	Analysis (Separate in Parts)	Synthesis (Creative Thinking)	Evaluation (Critical Thinking)
Process Suggestions	**Process Suggestions**	**Process Suggestions**	**Process Suggestions**
• collect •organize •relate •manipulate •record •demonstrate •order •model •discover •construct •code •teach •experiment •report •compute •operate •apply •show	•compare •separate •reduce •determine •differentiate •order •categorize •survey •role play •contrast •classify •deduce •divide •isolate •distinguish •dissect •relate	•invent •estimate •add to •predict •compose •extend •reconstruct •reorganize •hypothesize •alter •infer •dramatize •imagine •estimate •translate •design •rename •substitute	•discuss •criticize •decide •conclude •editorialize •interpret •judge •role play •justify •recommend •defend •evaluate •debate •solve
Product Suggestions	**Product Suggestions**	**Product Suggestions**	**Product Suggestions**
•diorama •puzzle •map •mobile •illustration •*time line* •data base •game •demonstration •sculpture •diary •photograph •report •scrapbook	•graph •chart •diagram •flow chart •survey •*photo essay* •questionnaire •report •essay •outline •simulation	•essay •recipe •song •machine •matrix • *T.V. show* •commercial •puppet show •drama •script •game •scenario •invention •story •*cartoon* •poem •radio show •myth	•survey •editorial •rating chart •discussion •letter *debate* •time capsule •court trial •panel •essay •speech •critique •rubric
	3. Rock or Mineral? As a class we will read the overhead "Minerals". Students will be given candy bars and will read the information on pg. 9 of the text. Following,, they will create a T-chart in their journals comparing rocks and minerals and will list some examples from the wall chart. If they can identify whether the candy they have been given is a "rock" or "mineral" they may eat it. ASSESSMENT: science journal (rubric)		
4. PERFORMANCE TASK: RockHound Students will "dig" for rocks encased in plaster of paris. They will organize these rocks into groups, following the instructions on pg. 7-8 of their text. They will present their groups to the class. ASSESSMENT: rubric IP SKILL: (PALS) DEBRIEF: How I worked with my group (self-assessment)		**7. Types of Rock: Metamorphic** Review meaning of metamorphic. Read the worksheet "Metamorphic Rocks" and record a definition in their science journals. Working with a partner, they will write 3 jeopardy-style questions and answers to be used in a game (questions regarding other types of rock will be teacher-written) ASSESSMENT: journal (rubric), game (anecdotal)	
8. PERFORMANCE TASK: Testing Rocks & Minerals Students will complete a series of experiments to test their rocks at the various stations (scratch, hardness, etc.) They will record their results and report their conclusions using the scientific method. ASSESSMENT: report (checklist) IP SKILL: sharing tasks & materials, complimenting others DEBRIEF: I'd like to compliment _____ for…(oral)			**9. Rock Groups: Samples** Student groups will use the results of their rock tests to re-sort their rocks into groups. In a whole class discussion students will compare results and defend their decisions. ASSESSMENT: class discussion (anecdotal)
12. Changing Landscapes Students will read pgs. 34-35 of the text as a group and will then watch the movie: "How Niagara Falls was Formed" and record the process on a timeline in their science journals. If possible, the class will visit Niagara Glen to see the layers of rock described. ASSESSMENT: science journal (rubric)	**11. Erosion/ Weathering** Simulate soil erosion using the erosion table and have students record this process as a photo essay in their science journals (drawings rather than real photos). Following this have students complete the experiment found on pgs. 32-33 of the text and the handout "What is Weathering?" Students will polish a rock from their yard in the rock tumbler. ASSESSMENT: journal (rubric), group experiment (anecdotal)	**13. PERFORMANCE TASK: The Rock Cycle** Students view the movie: The Rock Cycle and complete the video post test. Students will also complete the experiments found on pgs. 28-31 at centres. They will then write a script for a "rock concert" acting out the parts of the rock cycle. ASSESSMENT: post test (traditional assessment), script/presentation (rubric) IP SKILL: participating equally DEBRIEF: How everyone contributed (pie chart)	
15. Uses of Rocks and Minerals Divide the class into jigsaw groups and have them read a section of pgs. 17-19. Have them return to their group and teach the other students about the section they read. Play a quick game of base-hit baseball to review. ASSESSMENT: game (anecdotal) IP SKILL: listening & checking for understanding DEBRIEF: How I listened (rating scale)		**17. PERFORMANCE TASK: Uses of Rocks and Minerals** Assign students a rock or mineral to study and have them write and present a commercial for their rock portraying its uses. Have students cycle through in class research stations (internet, books, etc.). ASSESSMENT: commercial (rubric) IP SKILL: planning & wise time use DEBRIEF: How'd I do? (journal)	
The King has come to you and your group with a problem. He has discovered the perfect place for his castle, but it is on an island (your bristol board circle) located in the middle of a rocky, rapidly flowing river. This is a great selling point for the King because it makes a moat unnecessary. However, the river is eroding one end of the island and it will need to be preserved so that the king can build his castle on the land. Work with your group to design a plan that helps to reduce erosion along the shoreline. The king wants this done—use any materials you would like since cost doesn't matter. You might even want to consider using rocks or minerals. Make sure you explain why you chose the materials. After you have completed your design, test it out and report the results. Using the test results, improve the design if you can.			

Appendix C

Habits of Success Weekly Report

HABITS OF SUCCESS WEEKLY REPORT

Habit 1: Acts Responsibly
This means thinking before you act, making good decisions, solving problems, using class time wisely, working quietly and ignoring distractions as well as being prepared for class (materials, homework, gym clothes, etc.). A checkmark indicates that the desired behaviour *is* being shown.

Teacher *Self* *Additional Comments:*

☐ ☐

Habit 2: Be a Goal Setter: Begin with the End in Mind
I have reviewed my goal from last week. This is how I did:
☐ *I made my goal!* ☐ *I did not make my goal this week.*
Write about what you will do differently to make this goal next week OR write your new S.M.A.R.T. goal for this week and the steps you need to take to reach it:

_____

_____

A S.M.A.R.T. goal is…
☐ **S**pecific (I describe exactly what I will do)
☐ **A**ction-Oriented (I have a plan)
☐ **T**imely (I have a target date).
☐ **M**easurable (I'll know whether I met my goal)
☐ **R**ealistic (I can do it!)

Habit 3: Choose to do Important Things First
☐ I have recorded important dates for assignments, tests, practices, recitals, games, lessons, etc. in my organizer.
☐ I put a star beside the most important things for me to do this week.

Habit 4: Dare to Care: Think Win/Win

Here is a story of how _____ "dared to care" this week:

_____

Habit 5 Excel at Listening: Seek First to Understand, Then to Be Understood
Rate your listening skills this week.

Low 1 2 3 4 5 6 7 8 9 10 High

Habit 6 Find the best answers together: Work together to achieve more.
In your opinion, how effective was your group in inviting others to participate?

_____

N.B. This question will change depending on the interpersonal skills emphasized in class that week.

Habit 7: Get Fit & Healthy! Don't forget to exercise and eat well!!

Appendix D

Reflection Strip

Reflection Strip
Complete and attach this Reflection Strip to each item you choose to include in your portfolio. Name: _____ Date: _____
This piece of work shows: ❑ How I've been a responsible student ❑ Something important I've learned ❑ A goal I've met ❑ Something I need to work on ❑ Something I need help with ❑ Something I am proud of ❑ How I've put important things first ❑ How I've dared to care ❑ How I've worked to listen and learn from others ❑ How well I've worked with others ❑ What I do outside of school
1. I chose to include this item because: 2. How does this item demonstrate the things I've checked off above? 3. Other important things about me that this item shows: